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CURRENT AFFAIRS
MAY 1-15 – 2017
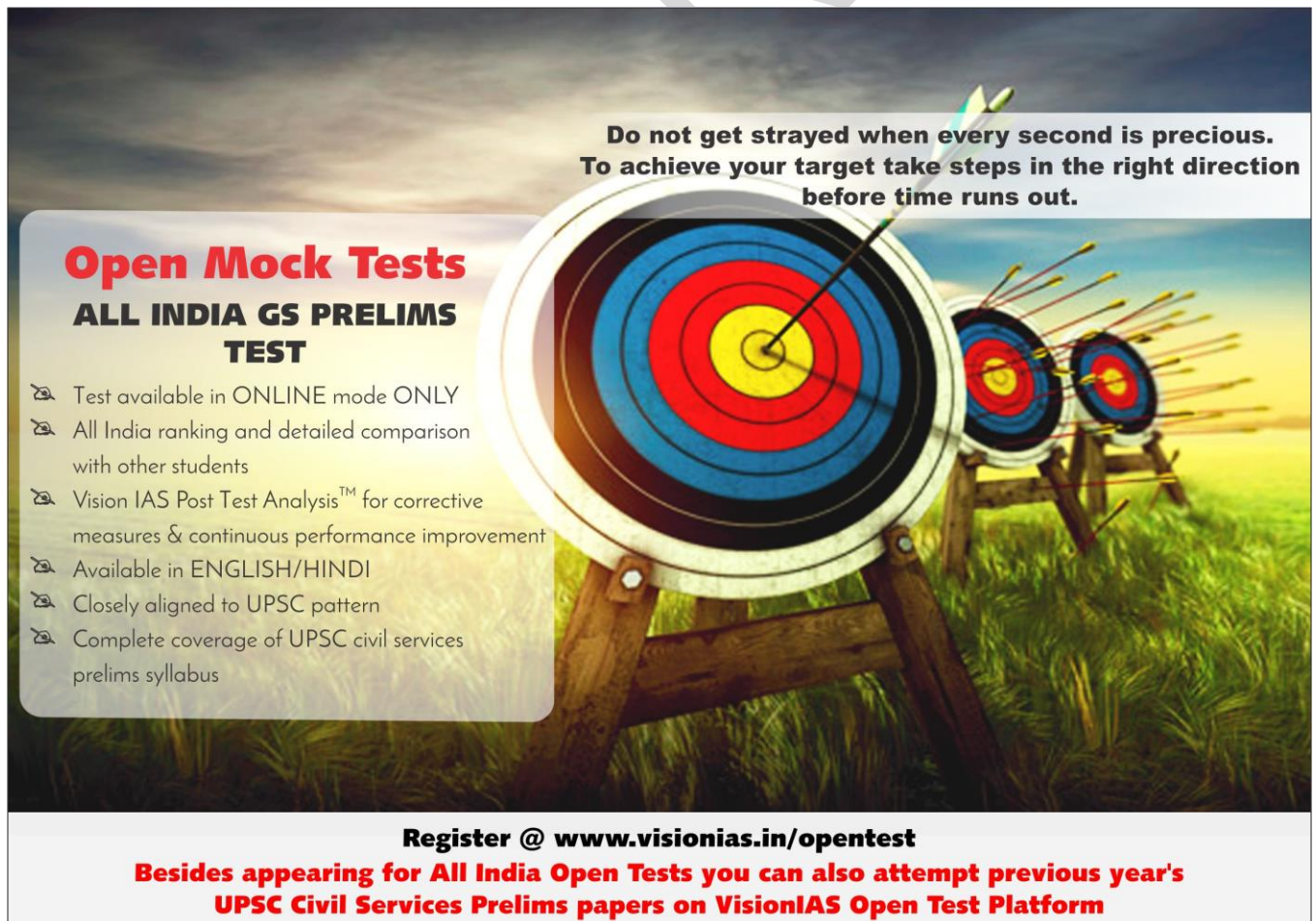
TABLE OF CONTENTS

1. POLITY AND CONSTITUTION

1.1. LOKPAL AND THE LAW

Why in news?

- Recently, the Supreme Court made it clear that the existing Lokpal and Lokayuktas Act, 2013 is workable in its present form.

Why clarification was needed?

- Government argued that in the absence of leader of opposition, selection committee could not be constituted and it has introduced an amendment to the lokpal act to address the situation.
- Thus, the court clarified that the Act provides for the selection committee to make appointments even when it is truncated due to a vacancy.

Some important features of the Lokpal and Lokayuktas Act

- **Constitution** of Lokpal at the Centre and Lokayukta in states - States to set up lokayukta within a period of 365 days from the date of commencement of the Act.
- **Composition** - Lokpal will consist of a chairperson and a maximum of eight members, of which 50 per cent shall be judicial members and 50 per cent of members of Lokpal shall be from SC/ST/OBCs, minorities and women.
- **Selection committee** - The selection of chairperson and members of Lokpal shall be through a selection committee consisting of Prime Minister, Speaker of Lok Sabha, Leader of Opposition in the Lok Sabha, Chief Justice of India or a sitting Supreme Court judge nominated by CJI, eminent jurist to be nominated by the President of India on the basis of recommendations of the first four members of the selection committee.
- **Jurisdiction of lokpal** - Prime Minister has been brought under the purview of the Lokpal. All entities receiving donations from foreign source in the context of FCRA in excess of Rs 10 lakh per year are brought under the jurisdiction of Lokpal.
- **Power with respect to CBI** - Lokpal will have power of superintendence and direction over any investigation agency including CBI for cases referred to them by Lokpal. Transfer of officers of CBI investigating cases referred by Lokpal with the approval of Lokpal.
- **Attachment of property** - The act also incorporates provisions for attachment and confiscation of property acquired by corrupt means, even while prosecution is pending. The act lays down clear time lines for preliminary enquiry, investigation and trial.

Issues with lokpal

- **Delay in appointment of Lokpal** due to the lack of political will.
- **Dilution of provisions through amendment** – The bill passed in 2016 has done away with statutory requirement of public disclosure the assets of public servants' spouses and dependent children.
- **Non-convergence with PCA –** The vesting of power of prior sanction with Lokpal has been almost nullified with amendments in prevention of corruption act which strengthen the requirement to seek government's permission.
- **Against separation of power –** Lokpal, being an administrative committee (a part of the executive), amounts to judiciary being proposed for executive duties .
- **Free hand to states** – The determination of nature and type of lokayuktas has been completely left on the state's discretion which leads to various problems. For example – misuse of power in appointment such as the lokayukta of UP remained in the post even after the once extended duration was also ended.
- **Ambit of Lokpal** – judiciary is totally excluded.

Way forward

While the Lokpal bill has been passed by Parliament, a number of steps still needs to be taken to make it effective such as:

- Effective implementation of the passed bill.

- Passing of other supporting bills which address issues related to tackling corruption such as citizen charter and electronic public service delivery, whistle blower protection, judicial accountability, etc.
- Strict guidelines and norms need to be setup to ensure that the institution of Lokpal does not get buried into day to day complaints regarding administrative inefficiency, corruption etc.

1.2. NATIONAL DEVELOPMENT AGENDA

Why in News?

- NITI Aayog recently prepared a draft three year action agenda which is a part of the overall National Development Agenda.

Background

- Planning Commission was abolished in 2014 and thereby the relevance of five year plans ended.
- Thereafter the Prime Minister Office advised NITI Aayog to prepare

(Source: NITI Aayog)

a National Development Agenda comprising of Fifteen Year Vision, Seven Year Strategy and Three Year Action Agenda.

Provisions

- NITI Aayog has selected some key items for its draft 3 year action agenda. These are:
    o **Three year revenue and expenditure framework**
    o **Energy**
    o **Governance, Taxation and Regulation**
    o **Doubling Farmers' income by 2022**
    o **Job creation in industry and services**
    o **Urban Development**
    o **Regional Strategies** for regions like North East, Desert Areas, Coastal regions, Drought regions and Himalayan region.
    o **Transport and Digital Connectivity -** Facilitate PPPs by reorienting the role of the India Infrastructure Finance
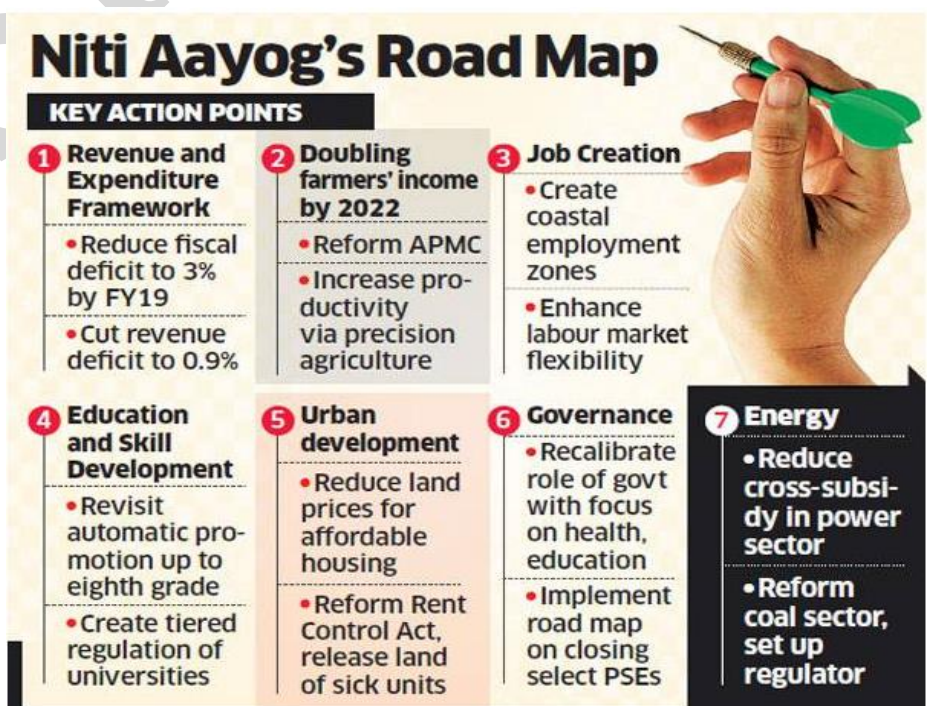
Company Ltd. (IIFCL), introduce low cost debt instruments and operationalize the National Investment Infrastructure Fund (NIIF).

o **Science and Technology** – Create national database of schemes, create National Science, Technology & Innovation Foundation etc.

Significance

- With a more open and liberalized economy, the planning agenda had to be changed according to the recent economic realities. Therefore comprehensive plan for long term and short term is a welcome step.
- It would create a multisectoral approach to developing an inclusive and sustainable economy.

1.3. INTEGRATED CASE MANAGEMENT INFORMATION SYSTEM

Why in news?

- The 'Integrated Case Management Information System' (ICMIS) has been introduced in the apex court for digital filing.

Functions of ICMIS

- Its functions include the option of e-filing cases, checking listing dates, case status, online service of notice/summons, office reports and overall tracking of progress of a case filed with the apex court registry.
- It will operate as an online gateway for payment of court fee and process fee, an online court fee calculator.

Benefits of ICMIS

- This will streamline the filing process for both the advocates and the registry.
- This will ensure transparency, provide easy access to case information and help in reducing the time in filing pleadings which, in turn, would increase the pace of judicial process.

1.4. ICT VISION DOCUMENT 2025

Election commission has come up with ICT vision document 2025 which spells out the strategy of adopting recent technologies and consolidating existing technologies in the Election ecosystem. There are four major components of the ICT 2025.

o Integrated Software application.
o GIS, Analytic and Integrated Contact Centre.
o IT infrastructure including data center, IT security, disaster recovery.
o Knowledge Management, Capacity building and social media engagement.

1.5. MUNICIPAL BONDS

Why in News?

- Recently, 94 cities across 14 states received credit ratings from agencies such as Crisil as part of their preparations for issuing municipal bonds.
- It rated the cities covered under Smart city Mission and AMRUT mission.
- 55 of these cities got "investment grade" ratings, 39 received credit ratings below the investment grade (BBB-).

DETAILS OF CITIES AND TOWNS AND RESPECTIVE CREDIT RATINGS:

Credit ratings	Cities/Towns
AA+	New Delhi Municipal Council (NDMC), Navi Mumbai and Pune
AA	Ahmedabad, Visakhapatnam and Greater Hyderabad Municipal Corporation
AA-	Surat, Nashik, Thane and Pimpri-Chindwad
A+	Indore, Kishanganj(Rajasthan), Kolkata, Vadodara(Gujarat) and Warangal(Telangana)
A	Jhunjhunu (Rajasthan)
A-	Alwar, Bhiwadi, Beawar, Jaipur(Raj), Bhopal,Jabalpur(MP), Mira Bhayandar(Maha) and New Town Rajarhat(W.Bengal)
BBB+	Ajmer , Kota and Udaipur(Rajasthan), Ludhiana(Punjab) and Jamnagar(Guj)
BBB	Kakinada, Anantapur, Kurnool and Tirupati (Andhra Pradesh), Davanagere and Hubbali-Dharwar(Karnataka), Kochi and Trivendrum (Kerala), Panaji (Goa), Kolhapur and Nagpur(Maharashtra), Jodhpur, Nagaur and Tonk(Rajasthan)
BBB-	Amaravati (Maharashtra), Belgavi (Karnataka), Bharuch and Bhavnagar (Gujarat), Bharatpur, Bhilwara, Bikaner and Hanumangarh(Rajasthan), Chittor and Cuddapah (Andhra Pradesh), Cuttack (Odisha), Ranchi (Jharkhand).
BB+	Proddatur, Nandyal and Nellore (Andhra Pradesh), Kollam and Kozhikode (Kerala), Kalol, Nadiad and Navsarai (Gujarat), Nanded and Solapur (Maharashtra), Gangapur City, Dhaulpur, Pali and Sawai Madhopur (Rajasthan)
BB	Adoni and Tadipatri (Andhra Pradesh), Dwaraka (Gujarat), Aizawal (Mizoram), Thrisur (Kerala), Berhampur, Rourkela and Sambhalpur (Odisha), Bundi, Churu, Chittorgarh, Hindaun, Jodhpur and Sujangarh (Rajasthan)
BB-	Adityapur, Chas, Deogarh and Giridh (Jharkhand), Mori (Gujarat), Baran and Jhalawar (Raj)
B+	Baripada and Puri (Odisha) and Hazaribagh (Jharkhand)
B	Bhadrak (Odisha)

Source: Ministry of Urban Development

Need

- Indian cities revenue is **less than 1% of gross domestic product**. The net result is that cities do not have adequate financial autonomy.

Background

- The **committee on urban infrastructure** headed by **Isher Judge Ahluwalia** (2011) had estimated that Indian cities would need to invest around Rs 40 trillion at constant prices in the two decades to 2031.
- **Municipal bond regulations were released by the SEBI in 2016**.
  - o Municipal bonds in India shall enjoy tax-free status if they conform to certain rules and their interest rates will be market-linked.
  - o Municipal Corporation needs to have **investment grade credit rating** and **must contribute at least 20 per cent of the project cost**.
  - o The corporation must **not have defaulted on any loans in the last one year**.
  - o The corporation is required to **maintain full asset cover** to repay the principal amount. Revenues from the project for which bonds were raised are to be **kept in a separate escrow account** and banks or financial institutions would monitor the account regularly.
- In 2017, NITI Aayog in its Three-year Action Agenda document also talks of utilizing Municipal Bond market.

Significance

- Low cost of borrowing will be an advantage for the ULBs, whose projects typically have low viability, long gestation period and low to moderate cost recovery. Higher the rating of corporation, lower is the interest and cost of borrowing.
- Municipal Bonds are necessary for the financial independence of the Urban Local Bodies.

Challenges

- Bond investors are unlikely to put money into cities unless they are convinced about their fiscal strength.
- Till now **most of the municipal bonds have been privately placed and not tradable**. This has disincentivized the adoption of municipal bonds. There is a **need of State guarantees** for the bonds.

MUNI MATTERS

FUND FUNDAS

- In India, urban local bodies (ULBs) can raise funds of **Rs 10,000cr** from markets by issuing munis
- States willing to tap market need projects rated by **Crisil, ICRA or Fitch**
- Move to give municipal bodies **more resources** to fund infra needs
- Market for munis in India almost **non-existent** unlike countries such as US where this is principal mode of financing urban infrastructure
- Developing countries like **South Africa, Hungary, Russia, and Mexico** also have developed muni markets
- Push to govt's **city-building project**, munis seen as fund-raiser beyond Centre & state grants, PPPs
- Munis market saw promising start,

but drastically slowed last decade

- **Market peaked in 2005-6** when ULBs raised Rs 3,000m (compared to Rs 750m in 2001)
- Fell sharply. In 2007, total turnover in muni market was Rs 300m
- **Unrealistic** to expect cities to have track record & credibility to mobilise private funding
- Small/medium ULBs **can't access capital markets** directly on strength of their balance sheets
- Only large ULBs such as **Ahmedabad, Indore, Pune, Kolkata, Hyderabad** etc able to utilize munis
- Now even these find it hard to raise funds via munis
- Ahmedabad Municipal Corp first ULB to access Indian capital market

Amount of municipal bonds placements (1997-2007) (World Bank)

City	Amount (Rs million)	Interest (%)
WATER SUPPLY & SEWERAGE		
Ahmedabad	1,000	14%
Ludhiana	100	13.5-14
Nagpur	500	13
Nashik	1,000	14.75
Ahmedabad*	1,000	9
Tamil Nadu**	110	9.2
CITY ROADS, STREET DRAINS		
Bangalore	1,250	13
IMPROVEMENT OF CITY ROADS		
Indore	100	
Madurai	300	12.25

*Tax free **Pooled Financing

Source: Working paper on Financing via Municipal Bonds in India, International Growth Centre, London School of Economics (April 2013), Icrier, TOI

Amount of municipal bonds placements (1997-2007) in Rs million

(bar chart showing years 1997 to 2007, x-axis 0 to 3000)

Source: World Bank studies on Municipal Financing Framework, Vol 1
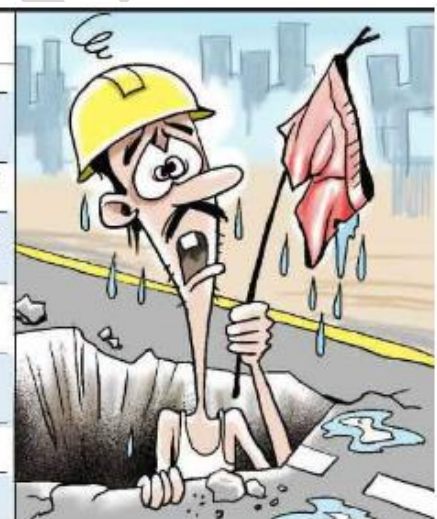
WHO'S IN CHARGE?

- It's a **complex web** at the ULB level that hinders an enabling environment to access funds in India's debt market
- Multiple authorities have **overlapping jurisdictions**, both at city and state-level
- 'Urban Development' is a 'state subject'
- This led to problem of 'moral hazard' in municipal debt market where most of regulatory responsibility lies with municipal borrowers
- The borrower-lender interface with states but most of the **responsibility affecting lenders** with the Government of India
- In the event of municipal insolvency or bond default, difficult to visualise who will bail out the ULB
- For access to funds and to leverage additional resources, **municipalities need to become creditworthy**
- In all 22 munis have been floated in the market so far. The total amount of capital raised is a **paltry Rs 1,200 cr** (Vaidya, 2009)

- It **can also be a source of inequalities** because the better rated municipal corporations would corner most of the investment, crowding out the investment for the already infrastructurally backward cities.

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Way forward

- Best practices like
  o The Development Bank of South Africa using its balance sheet to support municipal bond issues
  o Denmark having an agency to protect bond-holders in case one city in the pool defaults
  o Japan Finance Corp. for Municipal Finance having a sovereign guarantee etc. should be followed by India.
- Municipal bonds should be seen as only one part of city finances. Cities need to generate more revenue as well as get more untied funds from the money collected through the new GST. For all this, city administrations need to be empowered.

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2. INTERNATIONAL/INDIA AND WORLD

2.1. INDIA-PAKISTAN

Why in news?

The International Court of Justice (ICJ) stayed the execution of Kulbhushan Jadhav, who was sentenced to death by a Pakistan military court on the charge of spying, till its final decision.

- The Court said that India should have been granted consular access to Kulbhushan Jadhav as per the Vienna Convention.
- Pakistan should now inform the court about the steps it takes to implement the order.
- The ICJ judges are clear that these provisional measures are binding and create international legal obligations for the country to which they are addressed.

Background of Kulbushan Jadhav's case

Kulbushan Jadhav was allegedly arrested in the Chaman area of Balochistan on the Pakistan-Afghanistan border on March 3, 2016.

- India denied that he had any links to its government but said that he was running a business in the Iranian port city of Chabahar after a "premature retirement" from the Navy.
- India believed that Kulbhushan Jadhav was kidnapped from Iran and his subsequent presence in Pakistan has never been explained credibly.
- Kulbhushan Jadhav was **sentenced to death** in a **Field General Court Martial on April 10, 2017** after three-and-a-half months of trial after he was found guilty on charges of espionage.

India Approach to the International Court of Justice (ICJ)

- India had dragged Pakistan to **the International Court of Justice (ICJ)** on May 8, 2017 for refusing consular access to Jadhav and for **violating the Vienna Convention on consular relations**.
- India accused Pakistan of violating the Vienna Convention and conducting a "farcical trial" for convicting Jadhav without a "shred of evidence".

India's argument at ICJ:

Following are the main arguments made by India in the Kulbhushan Jadhav case at the International Court of Justice on May 15, 2017.

- Kulbhushan Jadhav has not got the right to get proper legal assistance and the right to consular access.
- The execution of the death sentence cannot be done while this court is hearing the appeal. Else, it will be a violation of the **Vienna Convention**.
- Jadhav was kidnapped from Iran where he was involved in business activities after retiring from the Indian Navy.

Pakistan's argument at the ICJ

At the May 15 hearing convened by the International Court of Justice (ICJ), Pakistan identified three problems with India's request and called for its dismissal.

- There is no **"urgency"** in this case as the date on which Jadhav will be executed has not yet been fixed;
- The ultimate relief sought by India, that is, a "reversal" of Jadhav's conviction, is unavailable; and
- The court **lacks jurisdiction**.
- Also, Pakistan argued that Vienna Convention provisions not intended to apply to a 'spy' involved in terror activities.

Analysis

India has achieved its immediate objective in approaching the ICJ, which has outlined provisional measures that enjoin Pakistan to take all steps needed to ensure that Mr. Jadhav is not executed pending adjudication of the matter.

- It may appear to be a complete victory for India on the questions of **jurisdiction, urgency and the core charge that Pakistan violated the Vienna Convention.** However, this is a preliminary ruling and all issues are open for adjudication at the final stage.

- As an immediate consequence, Pakistan is now under an obligation to grant consular access to Mr. Jadhav.
- India will have to leverage the moral and diplomatic advantage it has obtained through this ruling to help Mr. Jadhav prove his innocence before a civilian court and win his freedom.

Feature	International Court of Justice (ICJ)	International Criminal Court (ICC)
Year Court Established	1946	2002
UN-Relationship	Official court of the U.N., commonly referred to as the "World Court."	Independent. May receive case referrals from the UN Security Council. Can initiate prosecutions without UN action or referral.
Location	Peace Palace , The Hague, The Netherlands	The Hague, The Netherlands
Jurisdiction	U.N. member-states (i.e. national governments)	Individuals
Types of Cases	(1) Contentious between parties, (2) Advisory opinions	Criminal prosecution of individuals
Subject Matter	Sovereignty, boundary disputes, maritime disputes, trade, natural resources, human rights, treaty violations, treaty interpretation, and more.	Genocide, crimes against humanity, war crimes, crimes of aggression
Authorizing Legal Mechanism	States that ratify the U.N. Charter become parties to the ICJ Statute under Article 93. Non-UN member states can also become parties to the ICJ by ratifying the ICJ Statute. Each state must provide consent to any contentious case by explicit agreement, declaration, or treaty clause.	Rome Statute (**India** has not signed the **Rome Statute)**
Appeals	None. The ICJ decision in a contentious case is binding upon the parties. If a State fails to comply with the judgment, the issue may be taken to the UN Security Council, which has the authority to review, recommend, and decide upon enforcement.	Appeals Chamber. Article 80 of the Rome Statute allows retention of an acquitted defendant pending appeal.

2.2. INDIA-PALESTINE

Why in news?

Palestinian President Mahmoud Abbas visited India recently.

Highlights of the visit

- India and Palestine signed five memorandums of understanding. List of MoUs inked during the visit of President Abbas include:
  ✓ MoU on Visa Exemption on Diplomatic and official Passports
  ✓ MoU on Cooperation in Youth Affairs and Sports
  ✓ MoU on Agricultural Cooperation
  ✓ MoU on Cooperation in Health Sector
  ✓ MoU on Information-Technology and Electronics
- **"Political Support" to the Palestinian cause:**
  ✓ India reaffirmed its support for a political solution to the Palestine issue.
  ✓ Prime Minister said that India hope to see a sovereign, independent, united and viable Palestine, co-existing peacefully with Israel.
- **Peace talks between Palestine and Israel.**
  ✓ India hopes for early resumption of talks between Palestinian and Israeli sides to move towards finding a comprehensive resolution.
- **Capacity building in Palestine**
  ✓ India has been contributing to material & technical assistance to Palestine. India has been building a techno Park in Ramallah at the cost of $12 million.
- Both the countries also called for enhancing cultural exchanges between the two sides. India has sought Palestine's participation in the International Yoga Day to be observed next month.
- The Palestinian President also condemned terrorism in all its forms and manifestations and called for regional and international efforts to fight the menace.

Background

India and Palestine enjoy historically close and friendly ties.

- In 1947, India voted against the partition of Palestine at the United Nations General Assembly.
- India was the first Non-Arab State to recognize Palestine Liberation Organisation (PLO) as sole and legitimate representative of the Palestinian people in 1974. India was one of the first countries to recognize the State of Palestine in 1988.
- In 1996, India opened its Representative Office to the Palestine Authority in Gaza, which later was shifted to Ramallah in 2003.

2.3. INDIA-SRI LANKA

Why in news?

Prime Minister Narendra Modi visited Sri Lanka to participate in the UN Vesak Day celebrations in Colombo.

Highlights of the visit

- Prime minister said that the **themes of social justice and sustainable world peace**, chosen for the Vesak day, resonate deeply with Buddha's teachings.
- He inaugurated the Dickoya Hospital that has been built with Indian's assistance.
- He hailed the spirit of Indian-origin Tamils in Sri Lanka and announced the construction of additional 10,000 houses in upcountry areas and the extension of the emergency ambulance service.

What is Vesak?

Vesak (Sinhalese), Vesākha (Pāli), Vaisākha (Sanskrit) is the name used for the 2nd month in Sri Lankan traditional Moon calendar (Lunar calendar) which corresponds with the month of May in the Gregorian calendar (Solar calendar).

- It was on the full moon day in the month of Vesak, Prince Siddharta was born, became enlightened and attained Mahaparinibbāna.
- Vesak is associated with three important locations of Buddhist history – Lumbini in Nepal, the birth place of Prince Siddharta, Bodh Gaya (Buddha Gaya) Bihar State in India where The Buddha attained the most exalted Enlightenment under a Bodhi Tree and Kushinagar (Kusinara) in Uttar Pradesh, India where The Buddha attained Mahaparinibbāna.

United Nations International Day of Vesak

International Day of Vesak is a National holiday declared by the United Nations in 1999. The proposal was tabled by Sri Lanka.

In 2017, United Nations International Day of Vesak was hosted by Sri Lanka under the theme **"Buddhist Teachings for Social Justice and Sustainable World Peace".**

2.4. SOUTH ASIA SATELLITE

First South Asian satellite (GSAT-9), funded entirely by India, has been launched recently by ISRO. With this, India has placed itself uniquely in space diplomacy by giving a boost to neighborhood first policy.

Importance of space diplomacy for India

- **Peaceful and prosperous neighborhood** – This launch has given strong signal about India's neighborhood policy paving the way for sustained collaboration.
- **Space revenue** – There is lot of scope for space revenue for India due to its launch capabilities as well as many countries including Indonesia, Kazakhstan etc. seek to cooperate with India's ISRO in space matters.

About South Asia satellite

- It is 2,230kg geosynchronous communications and meteorology satellite, launched as a gift for South Asian countries.
- Its benefits include mapping natural resources, telemedicine, IT connectivity, DTH connectivity, more predictable weather forecasting and quick response to natural disasters.
- All the SAARC countries excluding Pakistan are part of this project. Thus it is named as South Asia Satellite and not "Saarc Satellite"
- Other important points:
  - first Indian satellite to use an electric propulsion
  - 4th consecutive success of GSLV cryogenic upper stage indicating better future capability.

- **Reducing rising Chinese influence in space** – China has been using space as a potent tool for diplomacy through establishment of Asia-Pacific space cooperation by China along with Pakistan, Bangladesh and other countries, setting up space academy in Sri Lanka etc.
- **Keeping pace in global space race** – With more than 60 countries trying their hands in space missions, majority of countries being Asian, India has rightly seen collaboration in space as one of the major determinants of foreign policy in future
- **Cooperation for social problems** – India has emerged as a leader in societal applications of space technology and thus we can cooperate in the area of capacity building of other countries on integrating space to solve problems of land, water, forests, crop etc.

2.5. UN-HABITAT

Why in news?

India has been unanimously elected as the president of the UN-Habitat, an organ of the United Nations promoting sustainable human settlements across the globe.

- On behalf of India, Housing and Urban Poverty Alleviation Minister will preside over the deliberations of the 58-member Governing Council (GC) of the UN-Habitat for the next two years.
- Since the UN-Habitat came into being in 1978, it is the third time that India has been elected to lead this organisation after 2007 and 1988.

About UN Habitat

The United Nations Human Settlements Programme (UN–Habitat) is the United Nations agency for human settlements and sustainable urban development.

- It was established in 1978 as an outcome of the First UN Conference on Human Settlements and Sustainable Urban Development (Habitat I) held in Vancouver, Canada in 1976.
- UN-Habitat maintains its headquarters at the United Nations Office **at Nairobi, Kenya.**
- It is mandated by the United Nations General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all.
- It is a member of the United Nations Development Group.
- The mandate of UN-Habitat derives from the Habitat Agenda, adopted by the United Nations Conference on Human Settlements (Habitat II) in Istanbul, Turkey, in 1996.

2.6. ONE BELT ONE ROAD (OBOR) SUMMIT

China organized a grand two-day OBOR summit to showcase its plans to build a network of trade routes-One Belt, One Road (OBOR)-that will connect Asia, Africa, the Middle East and Europe.

- The One Belt, One Road or the Belt and Road Initiative (BRI) forum in Beijing was attended by 29 heads of state or government and by official delegations from some 100 countries.
- All of India's neighbours, except Bhutan, sent high-level delegations for the summit.
- China has positioned the One Belt One Road (OBOR) as a project of immense economic sense to the world and a 'project of the century'.

India's objection to OBOR

India has stayed away from the Belt and Road Initiative (BRI) summit, making its concerns public.

- One, the B&RI's flagship project is the China-Pakistan Economic Corridor, which includes projects in the Gilgit-Baltistan region, ignoring India's "sovereignty and territorial integrity".
- India claims that China has not only been insensitive to its sovereignty, but has never fully explained its plan for the Belt and Road (formerly called One Belt One Road) initiative. There is a lack of transparency in China's agenda, indicating that New Delhi believes the B&RI is not just an economic project but one that China is promoting for political control.
- Two, the B&RI infrastructure project structure smacks of Chinese neo-colonialism. The projects could push smaller countries on the road into a crushing debt cycle, destroy the ecology and disrupt local communities.

Analysis

India's decision to skip the meeting came after a year of bilateral discord over China's stubborn opposition to India's entry into the NSG and a UN ban against Pakistan-based terrorist group Jaish-e-Muhammad leader Masood Azhar.

- The decision to not attend even as an observer, however, effectively closes the door for diplomacy. It stands in contrast to countries such as the U.S. and Japan, which are not a part of the B&RI but sent official delegations.
- There have been arguments within India that, by boycotting the Beijing meet, India was denying itself unending benefits of something as big as OBOR.
- India may also face some difficult choices in the road ahead, because as a co-founder of the **Asian Infrastructure Investment Bank** and as a member of the **Shanghai Cooperation Organisation (from June 2017)** it will be asked to support many of the projects under the B&RI.
- Given the **endorsement from the UN Secretary General**, who said the B&RI is rooted in a shared vision for global development, India should not simply sit out the project.

Way forward

India must actively engage with China to have its particular grievances addressed, articulate its concerns to other partner countries in a more productive manner, and take a position as an Asian leader, not an outlier in the quest for more connectivity.

2.7. RECENT MILITARY EXERCISES

- **SIMBEX** - It is an annual bilateral naval exercise conducted by the Indian Navy and the Republic of Singapore Navy (RSN). India and Singapore conducted **Singapore India Maritime Bilateral Exercise (SIMBEX) in the contentious South China Sea.**
- **CORPAT -** The Indonesian Navy and the Indian Navy have been participating in coordinated patrol (CORPAT) twice a year since 2002 to keep this vital part of the Indian Ocean Region safe and secure for commercial shipping and international trade. The 29th series of India–Indonesia CORPAT has begun at Port Blair under the aegis of Andaman and Nicobar Command.

3. ECONOMY

3.1. COMMERCIALISATION OF GM MUSTARD

Why in news?

- Genetic Engineering Appraisal Committee (GEAC) gave a positive recommendation for the commercial use of GM mustard for 4 years subject to certain field conditions.

About GEAC

- It is a statutory body under MoEFCC.
- It is the apex body for approval of proposals relating to release of genetically engineered organisms and products into the environment.
- The GEAC considers proposals for trial only after approval from the RCGM (Review Committee on Genetic Manipulation - a body comprising scientists) under Dept. of Biotechnology.

Background

- India, so far, has permitted only GM cotton, a non-food crop. NITI Aayog recently, in its three-year draft action plan had backed GM food crops also.
- India spends about $12 billion on imported edible oil which is bound to increase with the increase in population and per capita income.
- In 2010, the GEAC had also approved the commercialization of Bt brinjal. However, the then environment minister declined to sign off on the proposal due to strong protests. As of now, there is a case pending before the Supreme Court.

Arguments in favour of GM mustard

- **Superior crops** - they generate better yields and are resistant to pests and diseases. They are needed in future to address threats from climate change.
- **Biotechnology advancement** - GM crops is central to push for investment and growth in the biotechnology sector.
- **Swadeshi GM** - GM mustard, unlike Monsanto's Bt cotton, has been indigenously developed in the public sector by Delhi University-based Centre for Genetic Manipulation of Crop Plants.
- **GM oil imported -** India imports thousands of tons of GM edible oil (and other GM food items) every year with no evidence of health effects or deaths due to genetic alterations.

Arguments against GM mustard

Sarson Satyagraha, a broad platform of hundreds of organisations representing farmers, consumers, scientists and others, and other such organizations have raised following concerns:

- **Risks involved** - GEAC has shown unscientific attitude with regard to citizens' health and environment and have failed in their very mandate to protect citizens from risks of GMOs and no knowledge of whether GEAC consists of any agricultural experts and representative of farmers
- **Impact on food chain** - Use of GM mustard will increase chemicals in our food and farms.
- **Loss in employment** - Even 25% adoption of GM mustard will lead to loss of more than 4 crore employment days by poor women in mustard growing areas
- **Lack of transparency** - There is still opacity, i.e., there is no public data on effects of GM on human health, food chain, allied sectors (beekeepers, orchards and ayurvedic medicine makers and practitioners) etc.
- **No indigenization** - It is not "Swadeshi GM" as the genes used are the property of multinationals, which want to have control on seeds.
- **Monopoly and yield loss** - It would cause yield losses for farmers will be forced to buy seeds every season than using farm-saved seeds, affecting their sovereignty, crop diversity and profitability.

Way forward

- **Consultation with state governments** on the issue given that agriculture is a state subject.
- **Grievance redressal of all stakeholders** - all the grievances of farmers and the public must be resolved before allowing GM mustard by putting the safety documents online and addressing the concerns in all comments received.

- **Legal measure** - There should be a liability clause, that is, if something goes wrong the liability should be fixed statutorily like in case of US law, liability is huge in case the GM tech effects the regular varieties of crops. It will ensure that case of non-accountability, in case of pink bollworm pest attack on BT cotton, does not repeat itself in case of other GM crops.

3.2. COIR INDUSTRY

Why in News?

- A severe shortage of water, affecting coconut farms in Tamil Nadu, Kerala and Karnataka has decreased the yield of the coir industry in these parts.

Background

- India accounts for about 66% of the global production of coir and coir products.
- **Kerala** accounts for majority of coir industry in India. The geographical location of the coir industry is dependent on the availability of raw material (Coconut) available in states like Karnataka, Kerala, Tamil Nadu, Andhra Pradesh and Odisha.

> **Basic facts on coir industry**
> - Coir is a fibrous mass extracted out from the coconut husk.
> - It is an important cottage industry.
> - Coir Industry in India consists of two distinct segments namely –
>   - **White fibre** - It is smother and finer but weaker. It is obtained from immature green coconuts. It is used primarily for rope manufacture.
>   - **Brown fibre** – It is obtained by harvesting fully mature brown coconuts. It is stronger and thus used to make objects like brushes, mats etc.
> - Coir exports in 2015-16 amounted to about Rs 1900 crore.
> - Main export destination of India is USA.
> - This industry directly employs about 7 lakh people that are mostly from the rural areas. Women constitute about 70% of the workforce.

Government initiatives

- **Coir Udyami Yojana-** Rejuvenation, Modernization and Technology Upgradation has been renamed as Coir Udyami Yojana.
  - This is a **credited linked subsidy scheme** which provides 40% as Govt. subsidy, 55% as Bank loan and 5% beneficiary contribution for setting up of coir units with project cost up to Rs.10 lakh
  - No collateral security/third party guarantee is required and there is no income ceiling.
  - Assistance is available to individuals, companies, self help groups, NGOs, institutions registered under Societies Registration Act, 1860, co-operative societies, joint liability groups and charitable trusts.
- **Coir Vikas Yojana -**
  - It involves skill upgradation and quality improvement of the products.
  - It also **includes Mahila Coir Yojana** – training for men & women coir workers and providing subsidized ratts to women workers.
  - Its other components are development of production infrastructure, domestic market promotion, export market promotion etc.

> **Coir Board**
> - It is a statutory body developed under Coir Industry Act 1953.
> - It regulates the production and distribution of coir through registration and licensing.
> - It also fixes standards for this industry.
> - It is an advisory body to the government for production of coir products.
> - It functions under the Ministry of MSME.

Significance of coir industry

- With **increasing awareness of environment-friendly products**, the demand for coir-based items is on the rise in the international and domestic markets.
- **Rise of e-commerce** have led to an increased demand and marketing of mats and mattresses made of coir.

Challenges

- Climate Change and shortages of monsoonal rains can affect the yields of coir industry.
- There is a competition from countries like Indonesia, Vietnam and Sri Lanka that can affect the profit margins of the Indian coir industry.
- Problems of raw materials include poor quality of raw materials and high cost of materials.
- Labour problems include labour absenteeism, low wages, low skills, low labour productivity.
- Other challenges include non-availability of financial credit, problems in marketing of finished goods etc.

3.3. PUSA KRISHI APP

Why in News?

- This app was recently inaugurated in the Krishi Unnati Mela.

About the app

- It has been developed by ICAR's Indian Agricultural Research Institute.
- The Pusa Krishi app gives information about –
  - The varieties of products available to farmers
  - Technology that can be used to yield better crops
  - Information about produce and the region it is best suited for c
  - Information about animal feed and bio-fertilizers
- There is a feedback section which enables the agricultural scientists to have a real time conversation with the stakeholders.

> **Krishi Unnati Mela**
> - It is an annual event conducted by Indian Agricultural Research Institute, Delhi.
> - It shares information about new techniques in agriculture and animal husbandry and important central government schemes and programs.

> **Institutions related to agricultural extension**
> 1. **National Centre for Management of Agricultural Extension (MANAGE) (1987)** –
>   ✓ It is an autonomous institute under Ministry of Agriculture.
>   ✓ It is located in Hyderabad.
>   ✓ It assists the Central and State Governments and other organizations in effective management of their agricultural extension.
> 2. **Indian Council of Agricultural Research (ICAR)**
>   ✓ It is an autonomous body under Ministry of Agriculture.
>   ✓ Its head is Minister of Agriculture.
>   ✓ It coordinates agricultural education and research in India.

3.4. NATIONAL POLICY ON MARINE FISHERIES 2017

Why in News?

- National Policy on Marine Fisheries was launched recently by the Department of Animal Husbandry, Dairying and Fisheries.

Background

- India is the second largest producer of fish in the world contributing to 5.43% of global fish production.
- India is also a major producer of fish through aquaculture and ranks second in the world after China.
- After Independence, **fish production has been increased from 7.5 lakh tonnes in 1950-51 to 100.70 lakh tonnes during 2014-15.**

> **Branches of fisheries**
> 1. **Marine Fisheries –** It is that branch of fisheries which deals primarily with marine fishes and other sea products.
>   ✓ E.g. Oil sardines, mackerels, Bombay ducks, tunas and the prawns, catfishes, polynomids , pomfrets, crabs, oysters, marine algae
> 2. **Inland fisheries** - Inland fisheries **include both fresh water and brackish water fisheries**. The commercially important fresh water fisher y resources are carps, mullets, chanos, and prawns. Some brackish water fisheries include shrimps.

- Marine Fisheries is the fastest growing food producing sector in the world with a great potential to meet the food, especially protein requirement of a large number of population.
- After 2015 report of B.Meenakumari on deep sea fishing, the government had decided to revise the existing Marine Fisheries policy of 2004.

About the Policy

- The **aim of the policy** is to ensure the health and ecological integrity of the marine living resources of India's EEZ through sustainable harvests.
- The **overall strategy would be based on seven pillars**, namely sustainable development, socio-economic upliftment of fishers, principle of subsidiarity, partnership, inter-generational equity, gender justice and precautionary approach.
- The policy would be in line with the **FAO's Code of Conduct for Responsible Fisheries** on conservation, development and management of fisheries.
- **Some of the provisions of the policy are -**

- o **Monitoring, Control and surveillance** (to prevent accidents and trespassing)
  - ✓ For better monitoring and surveillance, chip-based smart registration cards for fishermen and their fishing vessels would be introduced.
  - ✓ Training and awareness would be given to fishermen to avoid crossing the International marine boundary line (IMBL).
- o **Integrated approach on fisheries management** –
  - ✓ **Species-specific and area-specific** management plans with **spatial and temporal measures** for sustainable utilization of resources.
  - ✓ Consevation of Ecologically and Biologically Significant Areas (EBSAs) and Vulnerable Marine Ecosystems (VMEs), endangered species etc.
  - ✓ It would **blend traditional knowledge and scientific business principles**.
  - ✓ Use of Information technology and space technology for improving the capacities of the fishing community. Eg. Using these to forecast weather
  - ✓ **Traditional Use Rights for Fisheries** (areas where mechanized fishing is prohibited and small scale fishers are allowed) would be continued.
  - ✓ Government would also introduce schemes to skill traditional fishers.
- o **Commercializing Fisheries** –
  - ✓ **Fisheries Data and Research -** Government would implement a **National Marine Fisheries Data Acquisition Plan** with all stakeholders.
  - ✓ **Mariculture -** Government will encourage schemes to set up mariculture farms/parks and setting up of hatcheries for supply of seed for development of the sector. There would also be a focus on preventing post-harvest losses.
  - ✓ **Island Fisheries –** India's islands would be exploited for the lucrative and commercial value fisheries like Tuna, snapper, groupers etc. Krill fishing would also be promoted in Areas Beyond National Jurisdiction (ABNJ).
  - ✓ **Fisheries Trade –** Government would focus on diversifying trade market, harmonizing FSSAI standards with international bodies, reducing the influence of middlemen and ecolabelling of fishes.
  - ✓ Entrepreneurship development, private investment, public private partnership for marine fisheries sector will be encouraged.
  - ✓ Government with the help of NABARD will provide institutional credit to the fishers.
- o **Marine environment and Fisheries -**
  - ✓ Review and periodically evaluate existing marine protected areas (MPAs)
  - ✓ It would provide **legislative support to ensure tenure rights of traditional fishermen** so that their livelihood is not affected by conservation measures.

Significance

- Monitoring and surveillance will ensure that Indian fishing fleet do not engage in **'Illegal, Unreported and Unregulated' (IUU) fishing.**
- **Women SHGs** would be promoted in the women dominated post harvest sector of fisheries.
- The policy if well implemented would **promote SDG Goal 14** of conserving and sustainably using Oceans, Seas and Marine resources for Sustainable development.
- It would also help in **boosting the primary sector** of our economy and improve its growth rate.

> **B Meenakumari Committee on deep sea fishing**
> - Allow fishing in the EEZ - between 22 km and 370 km beyond territorial waters – for vessels with a length of 15 metres or more by getting a "letter of permission" from the Centre.
> - These ships can be owned or acquired by Indian entrepreneurs or by joint ventures with up to 49 per cent foreign investment.
> - **Create a buffer zone between the near-shore and offshore regions** (waters between 200 m and 500 m in depth) along the coast and regulate fishing there "in order to augment resources in the near-shore areas as well as the deep-sea regions in the EEZ".

Challenges

- The policy recommends rescinding Letter of Permit scheme thus allowing private investments in deep sea fishing (as recommended by B. Meenakumari committee). This may threaten the small scale and traditional fishers community.
- Some State recommendations like a separate Ministry of Fisheries, extending the territorial limit of States etc. have not been taken up in the policy.

Way forward

- Recently the government has formulated an umbrella scheme **'Blue Revolution: Integrated Development and Management of Fisheries'** by merging all the existing schemes. This umbrella scheme will cover inland fisheries, aquaculture and marine fisheries including deep sea fishing, mari-culture and all activities undertaken by the National Fisheries Development Board (NFDB).
- The government should make this policy in tandem with the scheme to promote Blue revolution in the country.

3.5. SAMPADA SCHEME

Why in News?

- The government has given its approval for re-structuring the schemes of the Ministry of Food Processing Industries (MoFPI) under **new Central Sector Scheme – SAMPADA (Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters)** for the period 2016-20.

Need

- India ranks number one in total food production globally. Despite the large production of food products in India, post harvest losses are of major concern.
- India has a less than 10% processing level of the large production base.
- A well -developed Food Processing Industry helps in the reduction of wastage, improving value addition, promoting crop diversification, better return to farmers, promoting employment as well as increasing export earnings.

Background

- During 2015-16, the food processing sector constituted as much as 9.1 and 8.6 per cent of GVA in Manufacturing and Agriculture sector respectively.
- The government has allowed **100% FDI (automatic route) in trading including through e-commerce**, in respect of food products manufactured and/or produced in India.
- The government has set up a **Special Fund of Rs. 2000 crores** in NABARD to give affordable credit at concessional rate of interest to designated food parks and agro processing units.
- Food and agro–based processing units and cold chain infrastructure have been brought under the ambit of Priority Sector Lending (PSL).

Draft National Food Processing Policy 2017

- It advocates adoption of **sustainable environmental practices** like energy generation from bio waste
- For Quality, health and safety of products, the policy suggests compliance with FSSAI Act 2006 and **introduces self-regulation.**
- **Administrative issues** –
  - Each state should set up an **independent Department** to handle all matters related to food processing.
  - States should **create an e-platform**, to facilitate all necessary clearances in a time bound manner.
- **Infrastructure Development** –
  - The policy recommends following a cluster approach to tap the benefits of economies of scale in food processing.
  - States should register in the eNAM platform to promote direct procurement of all raw materials, especially horticulture produce.
  - Ceiling on Land Lease act should be raised or abolished to encourage entrepreneurs procure lands for bigger units.
  - Land should be allotted on priority to Mega food parks.
  - Technology adoption like barcoding, RFID tags etc. should be supported.
- It also **aims to promote entrepreneurship** in this sector by reforming labour laws, promoting incubation centres, setup skilling centres in each state etc.

Provisions

- The **objective of the scheme** is to supplement agriculture, modernize processing and decrease agri-waste.
- **It is an umbrella scheme** incorporating ongoing schemes of the Ministry of Food Processing -
  - Earlier schemes like Mega Food Parks, Integrated Cold Chain and Value Addition Infrastructure, Food Safety and Quality Assurance Infrastructure, etc.
  - New schemes like Infrastructure for Agro-processing Clusters, Creation of Backward and Forward Linkages, Creation of Food Processing & Preservation Capacities.

Significance

- Convergence of various schemes would help in **better implementation of the programmes**.

- The scheme would also help in **reducing the post harvest losses**.
- With rise of disposable income, this scheme would help in **fulfilling the demand of processed foods** like edible oils, juices etc.
- Food industry as compared to other industries has the largest number of factories and engages the largest number of employees. This scheme would **boost the employment prospects**.
- Processed foods can also help **address the problem of malnourishment** by increased availability of nutritionally balanced food.

> **Other Schemes of Food processing Industry**
> - **Mega Food Park Scheme**
>   - o It aims to provide modern infrastructure facilities for the food processing with a cluster based approach based on a hub and spokes model.
>   - o It includes creation of infrastructure for primary processing and storage near the farm in the form of Primary Processing Centres (PPCs) and Collection Centres (CCs) and common facilities and enabling infrastructure like roads, electricity, water etc. at Central Processing Centre (CPC).
> - **Integrated Cold Chain and Value Addition Infrastructure**
>   - o It is a Central Sector scheme.
>   - o Financial assistance is given in the form of grant-in-aid upto maximum of Rs. 10 crore per project.

3.6. MASALA BONDS

Why in news?

- The Union Minister of Road Transport & Highways and Shipping launched the **NHAI Masala Bond (National Highways Authority of India)** issue at the **London Stock Exchange.**

What are masala bonds?

- **Masala bonds are rupee-denominated bonds** issued by **Indian entities in the overaseas market** to raise funds.
- As of now, it is being traded only at the London Stock exchange.
- Masala bonds have been named so by the **International Finance Corporation (IFC)**, an **investment arm of the World Bank** which issued these bonds to raise money for infrastructure projects in India.
- They protect investors from exchange rate fluctuations as opposed to external commercial borrowing (ECB) that have to be raised and repaid in dollar.

3.7. WPI AND IIP BASE YEAR CHANGE

Why in news?

- The **CSO** and the **Department of Industrial Policy and Promotion (DIPP)** has shifted to 2011-12 base year from 2004-05 base year for Index of Industrial Production (IIP) and Wholesale Price Index (WPI) respectively.
- Inflation rate based on the new series of WPI declined to a four-month low of 3.85 per cent in April from 5.70 per cent in March, IIP grew 2.7 per cent in March as against 1.9 per cent a month ago.

Background

- Various macroeconomic indicators measures such as WPI, CPI, IIP, GDP and national accounts measure the health of the economy.
- WPI is primarily used as an indicator to measure inflation. RBI has recently moved to using CPI as a measure of inflation for formulating monetary policy.
- WPI is used as a **deflato**r for many sectors such as for estimating GDP by CSO as well as for calculating IIP.
- WPI and IIP have been revised in line with the recommendations of the **Saumitra Chaudhari Committee** which submitted its report in March 2014.
- A **Technical Review Committee (TRC)** has been constituted for the first time by the CSO in order to review the indexes and recommend appropriate methodological interventions in line with changing economic structure of the country. The TRC is to be chaired by Secretary, DIPP. It shall meet once a year.

What is new?

- Apart from the WPI base year, its basket of goods and their weightage have also been overhauled. 199 new items have been added and 146 items have been dropped in line with the changing demand in the country.

- **Taxes have been left out of WPI** in order to remove the impact of fiscal policy.
- The WPI will now be calculated based geometric mean rather than the earlier of arithmetic mean. CPI is calculated on geometric mean.
- 149 items have been added to the IIP and 124 deleted.

Changes in composition

IIP old series (Base year: 2004-05)			New series (Base year: 2011-12)	
	Item groups	Weight (%)	Item groups	Weight (%)
Mining	1	14.16	1	14.37
Manufacturing	397	75.53	405	77.63
Electricity	1	10.31	1	8
Total	**399**	**100**	**407**	**100**

WPI old series (Base year: 2004-05)			New series (Base year: 2011-12)	
Primary articles	102	20.12	117	22.62
Fuel and power	19	14.91	16	13.15
Manufactured items	555	64.97	564	64.23
Total	**676**	**100**	**697**	**100**

Implications

- The change in base year has brought all macroeconomic indicators on the same base making comparison easier. The new base year will provide a more realistic picture.
- Change in WPI basket of goods and weightage has brought it **closer to the CPI** and to changing consumption pattern in the country.
- Removing indirect taxes from WPI will make it a **compatible and appropriate deflator**. It will also bring it closer to **PPI (Production Price Index) and global practices**.
- This is how GVA is calculated (without the taxes) therefore making it **consistent with GVA.**
- Change in the IIP basket would **make it closer to the current production structure**.
- Establishment of TRC will help review the indices on time and make the required changes without delay.

3.8. VOLUNTARY UNEMPLOYMENT

Why in News?

- Recently, NITI Aayog member Bibek Debroy has flagged a **dramatic rise of voluntary unemployment** across the country.

Voluntary Employment

- **NSSO defines following three broad Activity Status** -
  o Working/Employed (engaged in an economic activity)
  o Seeking or available for work i.e. 'Unemployed'
  o Neither seeking nor available for work.

  Activity Status
  - Activity Status refers to the activity situation in which the individual is found during the reference period with respect to his participation in economic or non-economic activities.

  Labor force/work force is the total number of people employed or seeking employment in a country or region.
- **One is classified as voluntary unemployed**, if he or she is not employed and is not willing to join the workforce. It is mostly because **people choose not to work below a certain income level after 'investing' in education**.

Way forward

- This is an alarming situation because India's demographic dividend is wasted if voluntary unemployment rises to high levels. The levels are rising because the growth of high skilled jobs is disproportionate to the number of job seekers in this section.
- Mostly, the voluntary unemployment is because of the unavailability of job due to inadequate nature of work or inadequate salary. Therefore, the government should create a diversity of jobs for utilizing these voluntary unemployed.

3.9. TECHNOLOGY AND INNOVATION SUPPORT CENTRES TO COME UP

Why in news?

- The **Department of Industrial Policy and Promotion (DIPP)** and **World Intellectual Property Organisation (WIPO)** have joined hands to set up **Technology and Innovation Support Centres (TISC).**

What is it?

- **TISC** programme provides innovators in developing countries access to locally based, high quality technology information and related services, helping them exploit their innovative potential and to create, protect, and manage their intellectual property (IP) rights.
- The **Cell for IPR Promotion and Management (CIPAM),** under the Ministry of Commerce & Industry, has been designated as the national focal point for the TISC network.
- It shall identify potential host institutions, assess their capacities and support them in joining the TISC project.

> **WIPO**
> - WIPO is the **global forum for intellectual property services, policy, information and cooperation.**
> - It a specialized a self-funding agency of the **United Nations**, with 189 member states.
> - It was established in 1967 and is headquartered in Geneva, Switzerland.
>
> **CIPAM**
> - CIPAM is a professional body created under **DIPP (Department of Industrial Policy and Promotion).**
> - It has been entrusted with the implementation of the **National IPR Policy 2016.**
> - It aims to spread awareness about **IPR (Intellectual Property Rights), promoting the filing of IPRs through facilitation, providing inventors with a platform to commercialize their IP assets.**

3.10. INDIGENOUS NUCLEAR POWER

Why in news?

- Cabinet has recently cleared the proposal to construct 10 indigenous pressurised heavy water nuclear reactors (PHWR) with each having a capacity of 7,00 MWe, to be built by Nuclear Power Corporation of India Ltd (NPCIL). They will more than double the country's current installed nuclear capacity of 6,780 MWe.

> **About NPCIL**
> - It is a Public Sector Enterprise under the **Department of Atomic Energy**
> - It is registered as a **Public Limited Company** under the Companies Act
> - Its main objectives are operating atomic power plants and implementing atomic power projects for generation of electricity
> - It also has **equity participation in BHAVINI,** another PSU of Department of Atomic Energy (DAE) which implements Fast Breeder Reactors programme.

Significance of the decision

- **Doubling nuclear capacity** - These plants will more than double the country's current installed nuclear capacity
- **Domestic nuclear capacity building** – The move shows strong belief in the capability of Indian scientists to build our technological capacities which will help India to come at the forefront of global nuclear supply and manufacturing chain in future
- **Increase in employment** – These plants would create Rs. 70,000 crore worth of business for domestic manufacturers (especially in equipment manufacturing industry) and generate about 33,400 jobs.
- **Reducing dependency** – India is facing troubles in international collaborations such as bankruptcy filed by US company Westinghouse and cost issues with French company Ariva.
- **INDC commitments** – It not only ensures the nation's energy security, but also meet India's clean energy commitments for carbon-free sources of power under Paris deal.

Associated Concerns

- **Safety concerns** - The government has to adhere to strict safety standards in the design, building and operations of the proposed reactors.
- **Regulatory issues** – Independent body should regulate public sector nuclear power plants to avoid conflict of interest in having Atomic Energy Regulatory Board, a government body, overseeing them.
- **Time and cost overruns** – It has been the norm in the setting up of nuclear power plants so far. This needs to be changed to ensure operationalization of new plants within a time frame.
- **International aversion to nuclear power** - India's nuclear quest runs contrary to the global pushback against nuclear power.

Current status of India's nuclear capacity

- NPCIL is presently operating 22 commercial nuclear power reactors (details shown in the figure)
- The total installed capacity in India is 6780 MWe, constituting 2.1% of the total installed capacity in India.
- The reactor fleet comprises of three types of reactor
  - PHWR
  - Boiling water reactor (BWR)
  - VVER (Pressurized water reactor type)
- India today has civil nuclear cooperation agreements with several countries, including France, Russia, UK, US and Japan.

Comparison of different types of reactor

The different types of reactor have been compared in the following table:

Plant	Unit	Type	Capacity (MWe)
Tarapur Atomic Power Station (TAPS), Maharashtra	1	BWR	160
Tarapur Atomic Power Station (TAPS), Maharashtra	2	BWR	160
Tarapur Atomic Power Station (TAPS), Maharashtra	3	PHWR	540
Tarapur Atomic Power Station (TAPS), Maharashtra	4	PHWR	540
Rajasthan Atomic Power Station (RAPS), Rajasthan	1	PHWR	100
Rajasthan Atomic Power Station (RAPS), Rajasthan	2	PHWR	200
Rajasthan Atomic Power Station (RAPS), Rajasthan	3	PHWR	220
Rajasthan Atomic Power Station (RAPS), Rajasthan	4	PHWR	220
Rajasthan Atomic Power Station (RAPS), Rajasthan	5	PHWR	220
Rajasthan Atomic Power Station (RAPS), Rajasthan	6	PHWR	220
Madras Atomic Power Station (MAPS), Tamilnadu	1	PHWR	220
Madras Atomic Power Station (MAPS), Tamilnadu	2	PHWR	220
Kaiga Generating Station (KGS), Karnataka	1	PHWR	220
Kaiga Generating Station (KGS), Karnataka	2	PHWR	220
Kaiga Generating Station (KGS), Karnataka	3	PHWR	220
Kaiga Generating Station (KGS), Karnataka	4	PHWR	220
Kudankulam Nuclear Power Station (KKNPS), Tamilnadu	1	VVER -1000 (PWR)	1000
Kudankulam Nuclear Power Station (KKNPS), Tamilnadu	2	VVER -1000 (PWR)	1000
Narora Atomic Power Station (NAPS), Uttarpradesh	1	PHWR	220
Narora Atomic Power Station (NAPS), Uttarpradesh	2	PHWR	220
Kakrapar Atomic Power Station (KAPS), Gujarat	1	PHWR	220
Kakrapar Atomic Power Station (KAPS), Gujarat	2	PHWR	220

Total Nuclear Power Plant Capacity : 6780 MWe

	BWR	PWR	PHWR	FBR
Purpose	electricity	Electricity, nuclear powered ships	Electricity, plutonium production	Electricity, plutonium production
Coolant	water	water	Heavy water (D_2O)	Molten, liquid sodium
Moderator	water	water	Heavy water (D_2O)	Not required
Fuel	Uranium dioxide	Uranium dioxide (UO2)	UO2 or metal	Plutonium dioxide and UO2 in different combinations
Enrichment level	Low-enriched	Low-enriched	Not-enriched	Various mixtures of P-239 and U-235

Why India chose PHWRs?

- Availability of fuel - guaranteed as India has put most it's PHWRs under IAEA safeguards.
- No need of establishing expensive enrichment facility as it uses natural uranium as fuel.
- Availability of indigenous technology, expertise and resources.
- More energy efficient than comparable Light Water Reactor.

3.11. PHASED MANUFACTURING PROGRAMME

Why in News?

- Government has recently notified Phased Manufacturing Programme (PMP) for promoting the growth of domestic manufacturing of Cellular mobile handsets.

Provisions

- This would be a programme under Ministry of Electronics and Information Technology **(MieTY)**.
- The **overall aim of the scheme** is to impose duties (differential duty regime) and give tax reliefs and incentives on select products involved in the manufacturing of cellular handsets.
- It is called a phased manufacturing programme because it will give **fiscal benefits to domestic manufacturing** of the various components of cellular handsets in different fiscals.
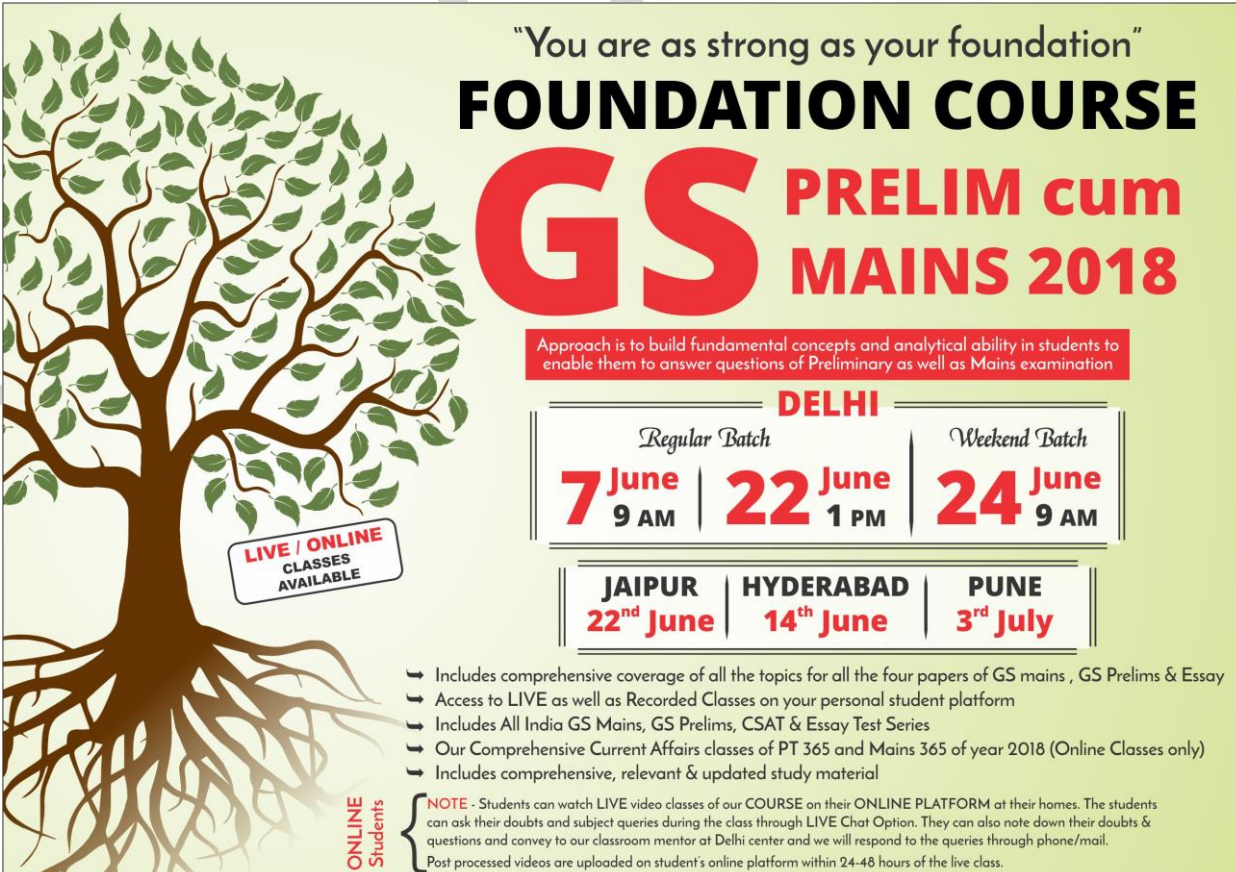
3.12. THINK20 TASK FORCE

Why in News?

- Germany recently convened the **first-ever G20 "digital ministers" meeting** and as a result a T20 task force (**Think20 Task Force**) was set up.

About T20 task force

- It comprises of think tanks and academia (**Observer Research Foundation of India** is in this force) that will offer recommendations to strengthen digital economies and manage the "digitalization" of traditional sectors.
- It would help articulate rules of economic operation for businesses, governments and users transacting on the Internet.
- It would also focus upon -The focus of the group would be on-
  - **Affordable and inclusive Cyber security**.
  - Balancing the **automation and its effects like loss of employment**

4. SECURITY

4.1. INTEGRATED THEATRE COMMAND

Why in News?

A committee appointed by the Defence Ministry, headed by Lt General D B Shekatkar (retd.) has submitted it report to MoD.

Recommendations

It recommended creating 3 integrated theatre commands:

- Northern command for the China border,
- Western command for the Pakistan border and
- Southern command for the maritime borders.

As the Northern and Western commands have land borders, Army General could head it owing to their expertise. The southern command could be headed by a Navy Admiral.

Background

- Presently, we have service-specific commands i.e. Air Force and Navy all have their own commands all over the country.
- Jointness among service commands: While the 3 Services progress and develop in their respective spheres with their independent identity, they function together and so coordinate their operations in war.
- During war: Coordination of operations is expected to be carried out at the level of Service Headquarters through the Chiefs of Staff Committee (COSC). The chairman of this COSC, is still not appointed.

- The Indian armed forces currently have 17 commands.
- There are 7 commands each of the Army [Northern, Eastern, Southern, Western, Central, South-western and Army Training Command (ARTRAC)].
- Air Force has [Western, Eastern, Southern, South-western, Central, Training and Maintenance].
- Navy has 3 commands [Western, Eastern and Southern].
- Each command is headed by a 4-star rank military officer.
- In addition, there are 2 tri-service commands [Strategic Forces Command (SFC)] and Andaman and Nicobar Command (ANC)], which is headed by rotation by officers from the 3 Services.
- ANC is an integrated theatre command.
- The other tri-service command, SFC, looks after the delivery and operational control of the country's nuclear assets. Since it has no specific geographic responsibility and a designated role, it is an integrated functional command, not a theatre command.

What is an integrated theatre command?

An integrated theatre command envisages a unified command of the three Services, under a single commander, for geographical theatres that are of security concern.

A composite and cohesive whole: Enmeshing the three Services together at different levels and placing them under one commander for execution of operational plans.

Efficacy and Efficiency against the enemy: The integrated theatre commander will not be answerable to individual Services. He will be free to train, equip and exercise his command to make it a cohesive fighting force. The logistic resources required to support his operations will also be placed at the disposal of the theatre commander so that he does not have to look for anything when operations are ongoing.

Arguments for

- Avoids duplication, economy of resources and ensures optimum utilisation of available resources.
- With a single commander, you can have all the military assets under him. This will result in combat efficiency. For example, nations like U.S and China have integrated commands. In fact, Chinese border with India has a single command,
- The COSC, during war times, functions on the principle of consensus. This makes decision-making delayed on jointness in operations can become difficult.

Arguments against

- India is not geographically large enough to be divided into different theatres, as resources from one theatre can easily be moved to another theatre.

- We have shortage of military infrastructure. For example, with only 34 out of 45 fighter squadrons present, dividing already scarce resources is infeasible.
- The US has global roles where it can't move assets from one theatre to another. India has no such problems of distance and time.
- There are fears among the smaller services that such a change would diminish their importance and the power of the service chiefs.

Way forward

Good starting point to the creation of integrated theatre commands would be the appointment of a Chief of Defence Staff or Permanent Chairman, COSC.

There has been a demand for other integrated functional commands, such as the cyber, aerospace and Special Operations commands, but the government is yet to approve any.

Creation of integrated theatre commands will require sustained political will. It must be a phased reform. There is a need for greater joint-ness among the three services, it is not appropriate to move to integrated theatre commands anytime soon.

4.2. 'SAMADHAN' DOCTRINE FOR NAXAL VIOLENCE

Why in news?

25 jawans lost their lives in the Sukma attack, the deadliest Naxal strike on the CRPF in years.

What is 'SAMADHAN'?

Operation 'SAMADHAN' is the Ministry of Home Affairs (MHA)'s answer to the Naxal problem.

The acronym SAMADHAN stands for:

- S-Smart leadership – states to "take ownership" of anti-Naxal operations and frame an "integrated strategy to deal with guerrillas"
- A-Aggressive strategy, -- More helicopter support for operations, 400 fortified police stations to be set up in Naxal belt.
- M-Motivation and training – Indian Army or specialized forces - such as Greyhounds - to train forces to take on Naxals.
- A-Actionable intelligence – Joint Task Forces for operations along inter-State boundaries to be set up. Better inter-state coordination and intelligence sharing.
- D-Dashboard Based KPIs (key performance indicators) and KRAs (key result areas),
- H-Harnessing technology –UAVs and drones for maoist hotbed areas; GPS tracking, HHTI (hand-held thermal image) devices, radar, satellite imagery, trackers in weapons.
- A-Action plan for each theatre
- N-No access to financing -- Prevention of Money Laundering Act (PMLA) to be reviewed to ensure effective choking of fund flow to LWE groups.

Way forward

- Union Home Minister referred to "Unity of purpose", "aggression in policy" and. ''choking of funds to Left extremists'' as the basic mantras to tackle naxal menace.
- Resumption of Left Wing Extremism (LWE) - specific schemes such as SRE, SIS, IAP/ACA, CIAT schools, is a sustainable solution in long term. Fast tracking building infrastructure, power distribution, mobile towers with 3G connectivity, and road-rail connectivity, is needed for maintaining law and order and create development.

4.3. BRAHMOS TESTED FROM ANDAMAN ISLANDS

Why in news?

The land-to-land configuration of BRAHMOS Block III, missile was launched from a Mobile Autonomous Launcher (MAL) for its full-range testing in the Andaman and Nicobar Islands.

Significance of Brahmos

- Brahmos is a supersonic cruise missile (speeds of Mach 2.8 to 3.0). It is the world's fastest anti-ship cruise missile in operation.
- It successfully hit the land-based target with bulls eye precision in a "top attack configuration", meeting all flight parameters in a copybook manner.
- The strike range of the missile was enhanced from 290 km to 450 km.
- It is a multi-platform, multi mission missile; capable of being launched from land, air, sea, sub-sea against surface and sea-bed targets.

> Brahmos was jointly developed by DRDO (India) and NPOM (Russia).
>
> After India became a member of the Missile Technology Control Regime (MTCR) in 2016, India and Russia are now planning to jointly develop a new generation of Brahmos missiles with 600 km-plus range. Earlier range was restricted to sub-300 kms.

4.4. STRATEGIC PARTNERSHIP MODEL

Why in news?

Cabinet cleared Strategic Partnership model for defence manufacturing.

What is strategic partnership?

- The idea is to enlist private sector defence companies in each of the segments as strategic partners for long-term contracts.
- This company then starts a Joint Venture with the foreign Original Equipment Manufacturer selected through the procurement process, to build the platform in India with significant technology transfer.
- And long term contracts will be awarded to these companies, to give them the economies of scale as defence involves large investments.

Significance

- To strengthen the private industries in the defence and defence PSUs and create domestic expertise in four key areas: fighter aircraft, helicopters, submarines, and armoured vehicles and main battle tanks.
- To enhance competition, increase efficiencies, facilitate faster and more significant absorption of technology,
- Create a tiered industrial ecosystem, ensure development of a wider skill base, trigger innovation and enable participation in global value chains as well as promote exports.
- Projects worth Rs. 50,000 crore are stuck in the absence of the SP chapter. Foreign OEMs have already made it clear that without this chapter, they are unable to form joint ventures with Indian defence firms and there has been a dearth of large-scale defence projects.

Criticism

- The SP model may block new technology and new players coming to the defence sector. This may lead to monopolization.
- Main concern for private sector is to choose only one particular segment for SP.

5. ENVIRONMENT

5.1. BUSTARD BREEDING CENTER

Why in news?

The Rajasthan government will set up a captive breeding centre for the great Indian bustard.

Background

- This will be the **first such facility** in the country aimed at saving the bird, which is the State bird of Rajasthan.
- Rajasthan accounts for 95% of the total world population of Great Indian bustard.

About Great Indian bustard

- A large bird with a horizontal body and long bare legs giving it an ostrich like appearance
- This bird is among the **heaviest of the flying birds**.
- **Found in central India, western India and eastern Pakistan**
- Habitat: Arid and semi-arid grasslands, open country with thorn scrub, tall grass interspersed with cultivation. It avoids irrigated areas.
- Listed in **Schedule I** of the Wildlife (Protection) Act, 1972 and **CMS or Bonn Convention**.
- It is also listed in Appendix I of CITES, as **Critically Endangered on the IUCN Red List**.
- It has also been identified as one of the species for the recovery programme under the **Integrated Development of Wildlife Habitats** of the Ministry of Environment and Forests.
- The biggest threat to this species is hunting. This is followed by occasional poaching outside Protected Areas, collisions with high tension electric wires, fast moving vehicles and free-ranging dogs in villages.

> **Integrated Development of Wildlife Habitats**
> It is a Centrally Sponsored Scheme where GoI provides financial and technical assistance to the State/UT Governments for activities aimed at wildlife conservation. The scheme has following three **components**:
> - **Support to Protected Areas** (National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves)
> - **Protection of Wildlife Outside Protected Area**
> - **Recovery programmes for saving critically endangered species and habitats.**

Convention on the Conservation of Migratory Species of Wild Animals (CMS) or Bonn convention

- It is an environmental **treaty under the aegis of the United Nations Environment Programme**
- CMS provides a global platform for **the conservation and sustainable use of migratory animals** and their habitats. Migratory species threatened with extinction are listed on Appendix I of the Convention.
- CMS brings together the States through which migratory animals pass, the Range States, and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range.
- Only global convention specializing in the conservation of migratory species, their habitats and migration routes.India is a member of the convention.

5.2. INDIAN WILD DOGS (DHOLES)

Why in news?

The Indira Gandhi Zoological Park (IGZP), running a conservation breeding centre for dholes plans to reintroduce a pack of 16 into the forests.

About dholes

- Dholes occur in several regions of India such as the Western Ghats, central Indian forests, Eastern Ghats, northeastern states and Terai region in north India.
- In the Himalayan region, they are found **in Sikkim and Ladakh**
- Protected under **Schedule 2** of the Wildlife (Protection) Act, 1972
- Listed as '**endangered**' by the International Union for Conservation of Nature (IUCN)

Indira Gandhi Zoological Park

- It is one of the largest zoological parks of Andhra Pradesh situated in Visakhapatnam.
- Surrounded by Eastern Ghats on three sides, the park has the flowing Bay of Bengal on its fourth side.

5.3. BLACK NECKED CRANE

Why in news?

The cranes are facing huge threats especially in Arunachal Pradesh.

About the crane

- **Migratory bird** most commonly found in China.
- It is legally protected in Bhutan and India and is considered sacred to certain Buddhist traditions.
- **IUCN status – Vulnerable**
- Listed in India's Wildlife Act as a **Schedule 1 species**
- It is locally known as **Dhung Dhung Karma**.
- Also it is the only high altitude crane amongst the 15 species found in the world.
- These birds build their nests in vast open environments, making them vulnerable to a host of predators.

5.4. INDIAN STAR TORTOISES

Why in news?

Chinnar Wildlife Sanctuary (CWS) has successfully rehabilitated Indian star tortoises, making it the only rehabilitation centre for star tortoises in the country.

About Indian star tortoise

- This species naturally inhabits **scrub forests, grasslands, and some coastal scrublands of arid and semi-arid regions.**
- It is found in northwestern India (Gujarat, Rajasthan) and adjoining southeastern Pakistan; eastern and southern areas from Tamil Nadu, Andhra Pradesh and eastern Karnataka to Odisha and throughout Sri Lanka
- Threats to this species survival include illegal collection and habitat loss.
- Included in Appendix II of the CITES
- **IUCN status: vulnerable**
- Placed under **Schedule IV of the Wildlife (Protection) Act 1972**

About Chinnar wildlife sanctuary

- Chinnar Wildlife Sanctuary is a **unique protected area** located in the rain shadow region in the eastern slope of Western Ghats in **Idukki in Kerala**.
- The area is diverse in eco systems and rich in ethnic cultural heritage.
- It is a well-known repository of **medicinal plants**.
- It supports a population of grizzled giant squirrel, star tortoise, tufted grey langur, gaur, spotted deer, slender loris, wild elephant, crocodile, tiger, leopard and many a birds, insects and plants.

5.5. AMUR FALCON

Why in news?

Amur Falcon were spotted at Umred Karhandla Wildlife Sanctuary near Nagpur.

About Amur Falcon

- Amur Falcons are **the migratory bird** that stay every year at **Doyang lake** (Nagaland) during their flight from Mongolia to South Africa
- **Pangti village** in Nagaland is considered as the world's Amur Falcon capital
- Centre will soon develop the Doyang Lake area as an eco-tourism spot for bird-watchers across the world.
- Until recently, Amur falcons were hunted by Naga tribesmen for meat.

Umred Karhandla Wildlife Sanctuary

- It is situated in **Maharashtra** and is 60 km from nagpur.
- Umred-Karhandla Wildlife Sanctuary is declared as the **satellite core of Bor Tiger** Reserve by national tiger conservation authority
- It is the first sanctuary in Maharashtra to be declared as 'satellite core', which means a sub-protected area supporting another protected area.

5.6. URBAN FLOODING

Why in news?

The Union urban development ministry released a paper 'Urban Flooding — Standard Operating Procedure' that lays guidelines to be followed by various public agencies and government departments.

Standard operating procedure

- Increased instances of floods in urban areas e.g. Uttarakhand Flash Floods, Chennai Floods necessitated the need of a **standardised plan** to tackle such situation.
- Thus the Guidelines by the ministry include following instructions for various departments:

> Urban floods are floods which occur in urban areas due to:
> - Heavy rainfall
> - Lack of water reservoirs such as lakes
> - Silting of drainage system
> - Population pressure, urbanisation and deforestation.
> - Lack of flood control measures etc.

ULBs and development authority

- Setting up **emergency operations centres (EOCs) and crisis-control room** in the corporation room and municipal wards.
- Organise **temporary shelters** with food and water supply
- Coordinate rescue plan with departments such as industries (chemical accidents), fire brigade, police and the health department
- Set up **information centre** for sharing details with the media and the public.
- Urban development authority has to prepare **city master plans**, including disaster mitigation plan and integration of city drainage and sanitation plan.

Health department

- Set up **Epidemic Control Unit (ECU)**,and analyse data received from hospitals
- Maintain emergency stock of medicine, equipment and blood.
- It has to establish health facility and treatment centers at disaster/relocation sites.
- It has to prepare and maintain **crisis/epidemic management report** and submit a final one to the EOC.

PWD and irrigation department

- PWD has to maintain the drains periodically and **update the Drainage Master Plan**.
- maintain an inventory of all roads and bridges by hierarchy, and prepare a **disaster response map identifying safe routes and exit.**
- undertake repairs of buildings and related infrastructure

Power supply and telecommunication

- Power supply department has to **identify sensitive locations** around high-risk power installations and raise the level of transformers and substations above flood level
- Maintain emergency power supply lines to the temporary relief shelters.
- The telecom department should deploy **portable communicable system** in the vulnerable flood site

Police and fire department

- The police should ensure **crowd management**, it must have a detailed report on evacuation and other rescue.
- Fire department has to prepare emergency fire extinguishing facilities and boats for recuse in flooded areas.

5.7. DROUGHT IN SOUTH INDIA

Why in news?

Kerala and Tamil Nadu are facing an unprecedented drought – the worst ever in over a century, according to experts; Karnataka's northern districts are without water for the third consecutive year.

> Droughts are not attributed to only scarcity of rainfall but more to inefficient management of water resources.
>
> Eg- region with less rainfall but growing less water intensive crops like bajra is not said to have drought like condition

Reasons for the Drought?

- **Rainfed agriculture**-Failure of Northeast monsoon and lack of irrigation facilities being the major reason for the drought.
- **Urbanization** has converted the wetlands and other areas into concrete surfaces that does not allow the conservation of water.
- **Inter state river water disputes**: southern states are not ready to sit together and solve the problem of sharing of river waters.
- **Water has lost the cultural connect**- historically large number of ponds were connected to each other so that overflow of water in one reaches other, there used to be celebration of festivals for conservation of water has gone, etc.
- **Faulty cropping pattern-** water intensive crops such as paddy, sugarcane are given preference by farmers because of high Minimum Support Price(MSP) given by government

What can be done?

- Focus should be on developing large number of small reservoirs at local levels may or may not linked to irrigation canals. Eg Gujarat has developed large number of check dams in Saurashtra region.
- Agroclimatic cropping pattern- should be followed
- Increase investment in irrigation especially micro irrigation practices like drip irrigation. Pradhan Mantri Krishi Sinchayi Yojna would help in this.

Drought Crisis Management Plan, 2015

The manual sets out four important measures that a State government should take at the time of a drought, with the Union government's help.

- MGNREGA to provide immediate employment to drought-affected people.
- The public distribution mechanism should be strengthened to provide food and fodder
- initiate actions to recharge the groundwater table by building check dams and providing pipeline water and other irrigation facilities
- The government should either waive off or defer farmer loans and arrange for crop loss compensation.

5.8. BONN CLIMATE MEET

Why in news

- The Bonn Climate Change Conference, organized by UNFCCC begin in Bonn, Germany to further implementation of Paris Agreement.
- At Bonn, Parties would continue their work on formulating the rule book for implementation of the provisions of Paris Agreement, the deadline of which is agreed to be 2018.

About UNFCCC?

- In 1992, countries joined the United Nations Framework Convention on Climate Change, as a framework for international cooperation to combat climate change by limiting average global temperature increases.

Paris Agreement

- At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal, legally binding global climate deal.
- The agreement sets out a global action plan to put the world on track to avoid dangerous climate change by limiting global warming to well below 2°C.

6. SCIENCE AND TECHNOLOGY

6.1. FORTIFIED FOODS TO TACKLE MALNUTRITION

Why in news

- Targeting children, the Rajasthan, Madhya Pradesh, Haryana and Himachal Pradesh governments have begun using fortified oil for their mid-day meal schemes.
- West Bengal and Andaman and Nicobar Islands are now distributing fortified wheat flour through the public distribution system.

Steps taken by FSSAI

- The Food Safety and Standards Authority of India (FSSAI) released a set of standards and a logo last year.
- Since then, it has focussed on awareness- and consensus-building.
- The FSSAI is also working with small local suppliers, for instance local flour grinding mills, to get them to add premixed micronutrients.

Food for thought
Fortification of eatables is aimed at fighting malnutrition

What it means
Fortification is the addition of key vitamins and minerals, such as iron, iodine, zinc, Vitamins A & D, to staple foods such as rice, milk and salt to improve their nutritional content

- The nutrients may or may not have been originally present in the food before processing
- It is a simple, proven, cost-effective and complementary strategy in use across the globe
- The draft Food Safety and Standards Regulations, 2016, prescribe the standards for fortification of salt, oil, milk, and rice

6.2. TARANG SANCHAR PORTAL FOR INFO ON MOBILE TOWER RADIATION

Why in News?

- The Telecom Department launched a portal – Tarang Sanchar Portal, that will allow people to track radiation emitted from mobile towers within a locality.
- The portal will empower consumers to know about the towers working in a particular area and whether they are compliant to the Electromagnetic field (EMF) emission norms defined by the government.

Background

- The timing of the launch coincides with the recent SC order on deactivation of a mobile tower in Gwalior on the plea of a 42-year-old cancer patient. The order had intensified the debate on the impact of radiation from mobile phone towers on health.
- The government has maintained that the mobile tower emissions rules in India are ten times more stringent than the global norms.

6.3. NOVEL MOLECULE TO TREAT CANCER - DISARIB

Why in news

- A novel small molecule, designed and synthesised by Indian researchers, has shown promise in targeted killing of cancer cells.

The molecule - Disarib

- The molecule (Disarib) works by binding itself to a protein called BCL2, which suppresses the death of cancerous cells while sparing normal cells.
- While BCL2 protein is produced in excess in cancer cells, its expression is almost undetectable in normal cells. Hence, Disarib targets and kills only cancer cells.
- Unlike the FDA-approved BCL2 inhibitor ABT199, Disarib showed better efficiency in killing cancer cells. Also, compared with ABT199 inhibitor, the small molecule did not cause any side effects.

Issue

- Expression of BCL2 is low in certain cancer cell lines such as breast cancer, chronic myelogenous leukemia and cervical cancer. So the Disarib molecule would be ineffective in these cancers.

6.4. REVERSING DRUG RESISTANCE MADE POSSIBLE

Why in news?

- Indian Researchers have been able to reverse antibiotic resistance in E. coli (Escherichia coli).
- They have unravelled the mechanism by which hydrogen sulphide (H2S) gas produced by bacteria protects them from antibiotics and plays a key role in helping bacteria develop drug resistance.

The mechanism of antibiotics resistance

- Antibiotics kill by increasing the levels of reactive oxygen species (oxidative stress) inside bacterial cells. So any mechanism (here H2S gas) that detoxifies or counters reactive oxygen species generated by antibiotics will reduce the efficacy of antibiotics.
- The drug-resistant strains were naturally producing more hydrogen sulphide compared with drug-sensitive E. coli and by blocking/disabling the enzyme that triggers the biosynthesis of hydrogen sulphide in bacteria, the researchers, have been able to reverse antibiotic resistance in E. coli bacteria.

6.5. NASA'S NEW FRONTIERS PROGRAMME RECEIVES 12 MISSION PROPOSALS

Why in news?

- NASA's New Frontiers program, which organises robotic solar system missions of discovery costing up to $1 billion, has received 12 proposals for missions to a variety of destinations.

The New Frontiers Programme

- The New Frontiers strategy is to explore the solar system with frequent, medium-class spacecraft missions that conduct high-quality, focused scientific investigations designed to enhance our understanding of the solar system.
- This would be the fourth mission in the New Frontiers portfolio. Its predecessors are the New Horizons mission to Pluto, the Juno mission to Jupiter, and OSIRIS-Rex.

6.6. XFEL (WORLD'S BIGGEST X-RAY LASER) GENERATES FIRST X-RAY LASER LIGHT

Why in news

- European XFEL, the world's biggest X-ray laser has generated its first beam of light.
- The X-ray laser light was generated from an electron beam from a superconducting linear accelerator. In a 2.1 km long accelerator tunnel, the electron pulses were strongly accelerated and prepared for the later generation of X-ray laser light.

About XFEL

- The European XFEL is the largest and most powerful of the five X-ray lasers worldwide, with the ability to generate the short pulses of hard X-ray light.
- It is 3.4-kilometre-long and most of it is located in underground tunnels in Germany.
- The X-ray light has a wavelength of 0.8 nanometre – about 500 times shorter than that of visible light.

Possible Benefits

- The achievable laser light wavelength corresponds to the size of an atom, meaning that the X-rays can be used to make pictures and films of the nanocosmos at atomic resolution – such as of biomolecules, from which better understanding of the basis of illnesses or the development of new therapies could be developed.
- The facility will enable research into chemical processes and catalytic techniques, with the goal of improving their efficiency or making them more environmentally friendly; materials research; or the investigation of conditions similar to the interior of planets.

6.7. EMERGING SOURCES OF ENERGY

Why in new?

With the increasing growth of wind and solar energy in the recent decade, other sources such as hydrogen, ocean cold fusion, etc are showing promising results for future.

Background

- Wind and solar energy account for 7% of the country's electricity production which is quite small, and also their supply is intermittent
- Coal, on the other hand, while still being the dominant player is a source of pollution and global warming, and it is also consumes lot of water.

Hydrogen as fuel cells
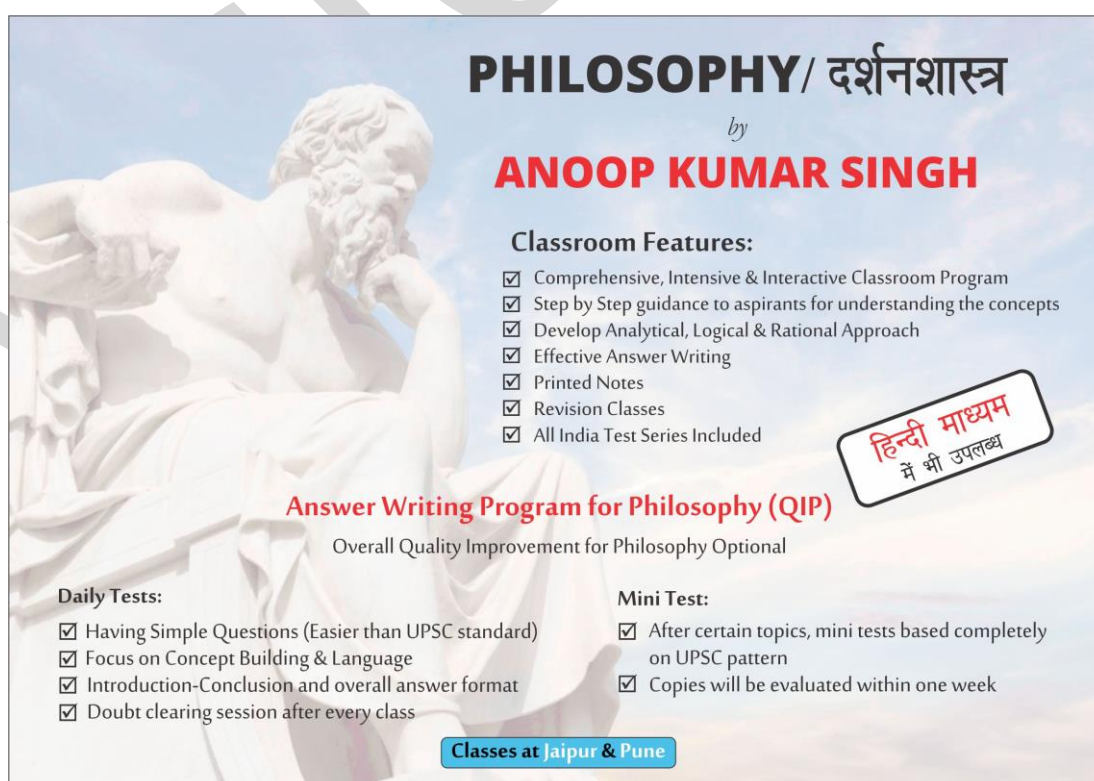
- A fuel cell enables hydrogen and oxygen to blend in an electrochemical reaction. The result is production of electricity, water, and heat. They mimic batteries.
- Hydrogen as a pure gas is not easily available is the major impediment making it very costly source of energy

Ocean Energy

- There are three subsets of this 24x7 energy source — waves (including up-down bob of the water surface), tides and underwater currents.
- For tidal energy- To harness it, difference of at-least 16 feet between high and low tide is needed which is a major impediment.
- Waves generated by wind and currents could contribute significantly to a carbon neutral energy system but this is mainly at its developmental stage

Cold Fusion

- Cold fusion describes a form of energy generated when hydrogen interacts with various metals like nickel and palladium. Excess heat is generated by the interaction that can be used to turn the turbine.
- No radioactive materials are used in cold fusion and cold fusion makes no radioactive waste.
- The major challenge is to control the reaction.
- But they are very small, relatively simple, inexpensive and self-contained form of energy.

7. SOCIAL

7.1. MISSION INDRADHANUSH

Why in news?

- PMO (Prime Minister Office) had advance the deadline of **Mission Indradhanush** from 2020 to 2018.
- PMO will review the mission through multi-modal platform **PRAGATI (Pro-Active Governance and Timely Implementation)** platform.

Mission Indradhanush

- It is a strategic endeavour under Universal Immunisation Programme 1985.
- It targets to immunize **all children below two years** of age **either unvaccinated, or are partially** vaccinated as well as **all pregnant women**.
- Immunisation against **seven vaccine** preventable diseases namely; Diphtheria, Pertussis, Tetanus, Childhood Tuberculosis, Polio, Hepatitis B and Measles.
- Moreover, Vaccines for Japanese Encephalitis, Haemophilus influenza type B, inactivated polio vaccine, Rotavirus vaccine and Measles Rubella vaccine are also being provided in selected states.
- Mission is technically supported by WHO, UNICEF, Rotary International and other donor partners.

> **What is PRAGATI (Pro-Active Governance and Timely Implementation)?**
>
> - It is an integrating and interactive platform aimed at addressing common man's grievances, and simultaneously monitoring and reviewing important programmes.
> - It use the Digital data management, video-conferencing and geo-spatial technology.
> - It is a three-tier system (PMO, Union Government Secretaries, and Chief Secretaries of the States.

> **Universal Immunisation Programme 1985.**
>
> - The UIP provide free of cost vaccines to all children during the first year of life.
> - To protect them against **12 life threatening diseases namely**; tuberculosis, diphtheria, pertussis (whooping cough), tetanus, poliomyelitis, measles, Hepatitis B, Diarrhoea, Japanese Encephalitis, rubella, Rotavirus and **Pneumonia** (added in May 2017).
>
> **Pneumonia vaccine**
>
> - India accounts for nearly 20% of global pneumonia deaths.
> - Pneumococcal conjugate vaccine (PCV) will give protection against 13 types of pneumococcal bacteria.

7.2. HOME GROWN VACCINE FOR LEPROSY: MYCOBACTERIUM INDICUS PRANII

Why in News?

- National Institute of Immunology has developed Mycobacterium Indicus Pranii (MIP), an indigenous vaccine for leprosy.

Highlights

- India has been declared Leprosy free country in 2005 because of less than one case per 10,000 population.

> **What is Leprosy?**
>
> - Bacterial disease caused by Mycobacterium leprae,
> - Affects the skin and peripheral nerves.
> - Long incubation period generally 5-7 years.
> - Timely diagnosis and treatment of cases, before nerve damage has occurred, is the most effective way of preventing disability.

- However, about 60% of the global leprosy patients live in India and Annual New Case Detection Rate (ANCDR) stands at 9.71 per 1,00,000 population.
- MIP will be administered as prevention for people living in close contact with those infected by the bacteria.
- MIP is now being introduced into the **National Leprosy Elimination Programme (NLEP)**. It will boost the immune system against the bacterial disease.

7.3. ONE IP- TWO DISPENSARIES SCHEME AND AADHAAR BASED ONLINE CLAIM SUBMISSION FOR SOCIAL SECURITY

Why in News?

- Minister of State for Labour and Employment, launched two schemes namely; **One IP- Two Dispensaries** and **Aadhaar based Online Claim Submission**.

Highlight of the Schemes

- Two Dispensaries schemes of **ESIC** has given an option to an Insured Person (IP) to choose two dispensaries, one for self and another for family through an employer.
- It will benefit all IPs, especially migrant workers who are working in other than home State.
- Moreover, Aadhaar based online Claim Submission scheme will provide an easy PF (Provident Fund) final settlement under **EPFO**.

What is EPFO (Employee Provident Fund Organisation)?	What is ESIC (Employee State Insurance Corporation)?
• It is statutory body under ministry of Labour and Employment implement retirement benefit scheme that's available to all salaried employees. • EPF scheme is applicable to any company employing 20 or more persons. • **Does not apply to** the co-operative societies employing less than 50 persons and the organisation who have their own EPF scheme but supervisor rest with EPFO.	• It is a statutory, autonomous corporation under ministry of Labour and Employment Established in 1948. • It implements medical and cash benefits to employee of organised sector against the events of sickness, maternity, disablement and death due to employment injury. • Applicable to all the States except Manipur, Sikkim, Arunachal Pradesh and Mizoram. • Mandatory for non-seasonal factories employing 10 or more persons and establishments employing 20 or more persons in certain states. • Social security coverage over Shops, hotels, restaurants, cinemas including preview theatres, road-motor transport undertakings and newspaper and Private Medical and Educational institutions.

7.4. NEED FOR NATIONAL POLICY ON THALASSEMIA

Why in News?

- On World Thalasemia day (May 8) various researchers and health experts call for National Policy on Thalassemia.

Why National Policy is needed?

- India is the thalassaemia capital of the world with 40 million carriers and over 1,00,000 thalassaemia majors under blood transfusion every month.
- Thalassaemia is now considered as a **disability** under Rights of Persons with Disabilities Act 2016, rather than a **health issue**.

> **What is Thalassemia?**
> - It is a genetic blood disorder with no cure except bone marrow transplant (BMT).
> - Characterised by abnormal production of haemoglobin in the body. The abnormality results in improper oxygen transport and destruction of red blood cells.
> - Lead to iron overload, bone deformities and in severe cases can cause heart diseases.
> - It require regular blood transfusions as an effective measure to prolong life.

- National Health Policy 2017 has overlooked the rare and genetic disease which is huge burden on public exchequer.

7.5. SWACHH SURVEKSHAN 2017: INDORE CLEANEST CITY

Why in News?

- On May 4 2017, Ministry of Urban Development has released the finding of Swachh Survekshan 2017.

> **Quality Council of India**
> - It was set up jointly by the Government of India and ASSOCHAM, Confederation of Indian Industry (CII) and FICCI
> - Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, is the nodal ministry for QCI.
> - Provide right and unbiased information on quality related standards
> - Represent India's Interest in International forums.

Highlights

- The Swachh Survekshan 2017 was conducted by **Quality Council of India** in 434 cities and towns to monitor the progress of the Swachh Bharat Mission.
- Indore has been declared the cleanest city in India and Bhopal ranked second.
- Gujarat has the highest number with 12 of its cities among the top 50 clean cities followed by Madhya Pradesh with 11 cities.

> **Swachh Survekshan-2017** - Aimed at capturing the outcomes of efforts towards:
> - Open Defecation Free
> - Door-to-door collection of garbage
> - Processing and disposal of Municipal Solid Waste.

7.6. HEALTH MINISTRY'S EVIN PROJECT

Why in news?

Electronic vaccine intelligence network (eVIN) project of Ministry of Health and Family Welfare has been lauded by various developing countries.

About eVIN

- eVIN is an indigenously developed technology system in India that digitises vaccine stocks and monitors the temperature of the cold chain through a smartphone application.
- The technological innovation is implemented by the United Nations Development Programme (UNDP).
- By streamlining the vaccine flow network, eVIN is a powerful contribution to strengthening health systems and ensures equity through easy and timely availability of vaccines to all children.

Some achievements

- Implemented in 371 districts in 12 states, Digitized vaccine inventories and record-keeping at nearly 10,500 vaccine stores and cold chain points.
- Achieved a regular reporting rate of more than 98 percent from these vaccine storage points.
- Monitored more than one –fourth of all the Mission Indradhanush districts as National Monitors and collected information on baseline and follow up coverage rates.

8. CULTURE

8.1. BASAVA JAYANTI

Why in news?

- **Basavanna Jayanti or Basava Jayanti** which marks the 884th birth anniversary of 12th century social reformer **Basaveshwara** was recently celebrated in Karnataka.

About Basaveshwara

- He is considered to be the founder of **Lingayatism or Lingayat Sect or Veerashaivism**.
- He was responsible for sweeping social changes in Karnataka during 12th century.
- He stood for the upliftment of the downtrodden and fought the evils that had crept into the Brahmanic Vedic tradition.
- He scripted his practical experiences in a novel form of literature called –**Vachana (poetry).** The main aim of Vachana (poetry) movement propagated welfare for all.
- He heralded the establishment of **'Kalyana Rajya' (Welfare state)**
- He gave two important and innovative concepts called "Sthavara ''and ''Jangama'', the meaning of which is "Static'' and ''Dynamic'' which are the main foundation stones of the revolutionary ideology of Basavanna.

8.2. SAINT TYAGRAJA

Why in news?

- Recently the 250th birth anniversary of Saint Tyagraja was celebrated.

About Saint Tyagraja

- Saint Tyagraja is one of the principal composers of the Carnatic trinity along with along with Muthuswami Dikshitar and Syama Sastri.
- He is referred to as Thyagabrahmam.
- Tyagaraja was born on 14th May 1767 in the village of Thiruvayaru in the Thanjavur district of Tamil Nadu.
- With the influence of Ramayana, he became an ardent devotee of Lord Rama. He composed about 24000 songs in his life devoted to Lord Ram.
- Tyagaraja Aradhana, a music festival conducted in honour of Tyagraja is organized in Thiruvaiyaru between the months of January and February every year.

8.3. THAKURANI JATRA FESTIVAL

What is it?

- The month long festivities of the Thakurani Jatra festival recently concluded in the city of Behrampur.

About the Festival

- Thakurani Jatra festival is a **biennial festival** celebrated in the **city of Behrampur (the silk city), Odisha.**
- Also known as **Ghata Yatra,** it is the chief festival of Southern Odisha.
- The festival marks the worship of Maa Buddhi Thakurani who is considered the **istadevi** and **Surakshya Kabacha (protector)** of the city of Behrampur.
- Originally the Deras, a weaver community, worshiped the goddess.

8.4. BANGANAPALLE MANGO

Why in news?

- **Registrar of Geographical Indications Registry (RGIR)** granted the Banganapalle Mango and **Bandar Laddu** the geographical indication (GI) tag, both belonging to Andhra Pradesh.

What is GI tag?

- The GI tag is an indication that is definite to a **specific geographical territory**. It is used for agricultural, natural and manufactured goods having special quality and established reputation.
- For a product to get the tag, it needs to be produced or processed or prepared in that region.
- The GI tag is governed by the **Geographical Indications of Goods (Registration and Protection Act), 1999.**
- This Act is administered by the Controller General of Patents, Designs and Trade Marks, who is also the Registrar of Geographical Indications.
- The registration of a GI is valid for 10 years after which it needs to be renewed.

9. ETHICS

9.1. WORLD PRESS FREEDOM DAY

Every year, the fundamental principles of press freedom are celebrated on 3rd may, as proclaimed by UNGA in 1993.

Why media ethics or press freedom is important?

- Watchdog of democracy
- Crucial for development and protecting all human rights
- Enabling voice of common man to be heard and access to information for the community

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About Reporters Without Borders (RWB)

- Located in Paris, France It is an international non-profit, non-governmental organization that promotes and defends freedom of information and freedom of the press.
- The organization has consultant status at the United Nations.
- It compiles the **World Press Freedom Index** every year that ranks 180 countries according to the level of freedom available to journalists.

- Raising awareness and culture of tolerance and combating hatred
- Paying special attention to areas and countries undergoing conflict, post-conflict, and transition situations.
- Preventing escapist approach and attitude in the minds of governments at various levels in various countries.

Various ethical issues involved in press

The world press freedom report shows that there has been a deep and disturbing decline in respect for media freedom at both the global and regional levels. Although there are various issues concerning the media, they can be summarized under one word, i.e., "**freedom**" of press to collect and disseminate news in a truthful manner. However, there is other side to this issue as well, which is **responsibility** of media. Thus, various values and norms should be followed from both sides.

Norms to be followed by politicians/organizations controlling/analyzing media

- **Freedom of expression** – It is seen as an inalienable human right which is more important for a person in profession of journalism. He/She needs to make sure that the masses are informed about the true picture of events happening around the world.
- **Security and safety of media persons** – Adequate mechanisms should be in place to prevent harassment of editors, publishers etc. and attacks and loss of lives of journalists while pursuing their profession. System should be strengthened to penalize the concerned person sternly so that resulting self-censorship from violence does not deprive society of information
- **Culture of tolerance and openness** - Restrictions on publications such as censorship, fine, suspension and closing down should be taken only when extremely required. In fact, people in authority should encourage questioning by journalists regarding their actions to promote transparency and accountability
- **Rules to prevent corporatization** of media because corporatization has led to worrying about profit and loss. Thus, issues such as contract appointments becoming the norm, controlling journalists through transfer and salary, no job protection in the visual media etc. are cropping up

Norms and ethics to be followed by media persons

- **Understanding their responsibility** – especially in countries like India, plagued with backward ideas such as casteism, communalism, poverty, social evils such as honour killing etc.
- **Accuracy, honesty and fairness** – in collection and publication of news because it is directly related to public interest and at times, may affect the reputation of a person unnecessarily
- **Truthfulness**– Efforts should be made to present facts without distortion of news especially in this post-truth world where element of truth are mixed up with certain elements of untruth to create sensation.
- **Representativeness and diversity** - Editors should curb paid news and the organization should promote opinions from all sections of society (ethnic and linguistic minorities, persons with disabilities, marginalised groups, women etc.) equally without discrimination. For this, internal diversity is required
- **Focus on real problems** and not non-issues such as those concerning the activities of film stars, models, cricketers and so on and give more prominence to much more important issues that are basically socio-economic in nature.

- **Professionalism and self-regulation –** in areas such as content and use of audits (both qualitative and quantitative), ethical codes, professional secrecy regarding source of information, non-plagiarism and sector-led performance assessment based on specific targets.
- **Respect for privacy** and people's private lives and no defamatory criticism should be made unless required through legitimate perception of the public interest.
- **Promotion of values** – as they leave imprint on the young minds. Thus there should not glorify power, brutality and immorality.

Situation in India

India ranks abysmally low at 133 among 180 countries in World press freedom index 2016, despite jumping 3 spots up compared to last year. The Indian media is grappling with various issues such as

- Attack on Journalists and bloggers by various religious groups that are quick to take offense
- Restricted access to certain regions such as Kashmir that are regarded as sensitive by the government
- Indifference to these threats and problems in higher echelons of government
- No mechanism for protecting journalists etc.

Way forward

Following steps can be taken to ensure media freedom as well as their accountability

- **Promotion of community media** – It ensures media pluralism and freedom of expression and an alternative to public, commercial and social media with greater focus on local issues of concern, accountability to community covering rural and hard-to-reach populations as well. Thus governments should ensure legal recognition, fair access to spectrum, licensing, funding etc.
- **Promotion of active media watch groups** - as India is among the few democracies without such groups engaged in objective analyses of the media, discerning prejudices and latent biases, and subjecting the media to systematic criticism and scrutiny.

Promotion of media writing about media itself - there is often an unstated rule that prevails in most newspapers: media doesn't write on media and media organizations won't write about each other, either in praise or in criticism. Most Indian newspapers also don't have an open policy on acknowledging mistakes or misreporting.

10. MISCELLANEOUS

10.1. LEARN TO TRAP MONKEYS FROM MANKIDIA TRIBE

Why in news?

Odisha, the State's Forest and Environment Department has asked its personnel to learn a few tricks from the Mankidia tribe to contain the menace.

Ingenious method

Mankidia tribe

- They are classified as Particularly Vulnerable Tribal Groups (PVTGs) in Odisha.
- They are semi nomadic and they used to hunt monkey for its meat.

When they spot a monkey in a tree, they surround it by climbing nearby trees and structures. Once it is surrounded, they shake the tree till the animal falls. A team on the ground, who are ready with a net, quickly trap the animal.

10.2. 2016 INDIAN EXCLUSION REPORT (IXR)

- The 2016 Report released by Center of Equity Studies reviews exclusion with respect to four public goods: pensions for the elderly, digital access, agricultural land, and legal justice for undertrials.
- Most severely and consistently excluded from provisioning tend to the same historically disadvantaged groups: Dalits, Adivasis, Muslims, and persons with disabilities and age-related vulnerabilities.

10.3. GRIEVANCE REDRESSAL APP FOR CAPF

- The Union home ministry has recently launched a grievance redressal mobile app for the Central Armed Police Forces (CAPF).
- It will give soldiers a direct line of contact with home ministry and if there is delay or lag, the matter could be escalated to Home minister as well.
- It will help increase transparency and avoid grievance being aired in social media.

The CAPF includes jawans from the
- Border Security Force (BSF),
- Central Reserve Police Force (CRPF),
- Central Industrial Security Force (CISF),
- Indo-Tibetan Border Police (ITBP) and
- Sashastra Seema Bal (SSB).

10.4. INDIAN RAILWAYS TO INTRODUCE EOTT

- The **Indian Railways** will soon introduce **End of Train Telemetry (EoTT)** equipment used to establish communication between the **locomotive driver and the last wagon of the train** ensuring that the train is running with all coaches/wagons as a complete unit.
- In case of a train parting, the system is designed to indicate to the driver the parting of the train and to apply brakes to the rear unit.